

PUBLIC HEALTH REPORTS

VOL. XXVIII.

JANUARY 10, 1913.

No. 2.

BIOLOGICAL PRODUCTS.

ESTABLISHMENTS LICENSED FOR THE PROPAGATION AND SALE OF VIRUSES, SERUMS, TOXINS, AND ANALOGOUS PRODUCTS.

The following table contains a list of the establishments holding, on January 1, 1913, licenses issued by the Treasury Department in accordance with the act of Congress approved July 1, 1902, entitled "An act to regulate the sale of viruses, sérums, toxins, and analogous products in the District of Columbia, to regulate interstate traffic in said articles, and for other purposes."

The number of the license of each firm is also given, together with the names of the several products for which licenses have been granted.

No. of license.	Establishments.	Products.
1	Parke, Davis & Co., Detroit, Mich.	Diphtheria antitoxin, antigonococcic serum, anti-streptococcic serum, antitetanic serum, antitubercle serum, tuberculins, bacterial vaccines, erysipelas and prodigious toxins, and vaccine virus.
2	H. K. Mulford Co., Philadelphia, Pa.	Diphtheria antitoxin, antidyenteric serum, antimeningococcic serum, antipneumonic serum, anti-streptococcic serum, antitetanic serum, tuberculins, vaccine virus, normal horse serum, bacterial vaccines, and antirabic virus.
3	Dr. H. M. Alexander & Co., Marietta, Pa.	Diphtheria antitoxin, antitetanic serum, antirabic virus, vaccine virus, and tuberculins.
5	Fluid Vaccine Co., Milwaukee, Wis.	Vaccine virus.
6	The Snee Laboratories, Swiftwater, Pa. .	Diphtheria antitoxin and vaccine virus.
8	The Cutter Laboratory, Berkeley, Cal. .	Diphtheria antitoxin, antistreptococcic serum, tuberculins, bacterial vaccines, and vaccine virus.
9	Frederick Stearns & Co., Detroit, Mich.	Diphtheria antitoxin, streptolytic serum, and pneumolytic serum.
11	Pasteur Institute of Paris, Paris, France.	Diphtheria antitoxin, antidyenteric serum, antimeningococcic serum, antiplague serum, antistreptococcic serum, sérum antivenimeux, antitetanic serum, and antiplague vaccine.
12	Chemische Fabrik auf Actien, Berlin, Germany.	Diphtheria antitoxin and antistreptococcic serum.
14	Health Department of the City of New York.	Diphtheria antitoxin, antitetanic serum, antirabic virus, vaccine virus, tuberculin, antimeningococcic serum, and antistreptococcic serum.
16	National Vaccine and Antitoxin Institute, Washington, D. C.	Diphtheria antitoxin, vaccine virus, normal horse serum, and bacterial vaccines.

No. of license.	Establishments.	Products.
17	Lederle Antitoxin Laboratories, New York City.	Diphtheria antitoxin, antistreptococcic serum, antitetanic serum, suspension of lactic acid bacilli, vaccine virus, antityphoid vaccine, and bacterial vaccines.
18	Burroughs, Wellcome & Co., London, England.	Diphtheria antitoxin, antigenococcic serum, antidisenteric serum, anticolon-bacillus serum, antistaphylococcic serum, antistreptococcic serum, antityphoid serum, antimeningococcic serum, normal horse serum, tuberculins, bacterial vaccines, and antitetanic serum.
19	Memorial Institute for Infectious Diseases, Chicago, Ill.	Diphtheria antitoxin.
21	Swiss Serum and Vaccine Institute, Berne, Switzerland.	Diphtheria antitoxin, antidisenteric serum, antimeningococcic serum, antipneumonic serum, antiplague serum, antistreptococcic serum, antitetanic serum, tuberculins, anticholera vaccine, antiplague vaccine, antityphoid vaccine, and bacterial vaccines.
22	Institut Bactériologique de Lyon, Lyon, France.	Antidiphtherie serum and normal goat serum.
23	Bacterio-Therapeutic Laboratory, Asheville, N. C.	Tuberculins.
24	Farbwerke, vormals Meister Lucius und Brüning, Höchst-on-Main, Germany.	Diphtheria antitoxin, antidisenteric serum, antimeningococcic serum, antipneumonic serum, antistreptococcic serum, antitetanic serum, and tuberculins.
25	Tuberculin Society of St. Petersburg, St. Petersburg, Russia.	Tuberculinum purum.
27	Institut Pasteur de Lille, Lille, France.	Sérum antivenimeux.
29	The Behringwerk, Marburg, Germany.	Antitetanic serum and tuberculin.
30	Dr. G. H. Sherman, Detroit, Mich.....	Bacterial vaccines.
31	E. Merck, Darmstadt, Germany.....	Diphtheria antitoxin, antimeningococcic serum, antipneumonic serum, antistreptococcic serum, normal horse serum (liquid and dried), jequiritol serum, tuberculins, bacterial vaccines, and leucofermantin (antitryptic sheep serum).
32	Kalle & Co., Biebrich, Germany.....	Tuberculin (Rosenbach).
33	American Biologic Co., Kansas City, Mo.	Antirabic virus.
34	The Béranek Laboratory, Neuchatel, Switzerland.	Tuberculin (Béranek).
35	Dr. Carl Spengler, Davos-Platz, Switzerland.	I. K. immune blood.
36	Dr. C. L. McDonald, Cleveland, Ohio..	Bacterial vaccines.
37	Western Biological Co., Kansas City, Kansas.	Do.
38	Laboratorio di Terapia Sperimentale (Bruschettini), Genoa, Italy.	Tuberculosis serum-vaccine.
39	Pharmaceutisches Institut Ludwig Wilhelm Gans, Oberursel, near Frankfort on the Main, Germany.	Antidisenteric serum.
40	Hygienic Laboratory of the California State Board of Health, Sacramento, Cal.	Antirabic virus.
41	Arkansas Pasteur Institute, Little Rock, Ark.	Do.
42	Sophian-Hall-Alexander Co., Kansas City, Mo.	Diphtheria antitoxin, antimeningococcic serum, antirabic virus, and bacterial vaccines.
43	The Abbott Laboratories, Chicago, Ill..	Staphylobacterins, streptobacterins, and antityphoid vaccine.

TYPHUS FEVER AND TYPHOID FEVER.

A REPORT ON PAPERS READ AT THE SOUTHERN MEDICAL ASSOCIATION MEETING AT JACKSONVILLE, FLA., NOVEMBER 12-14, 1912.

By JOSEPH GOLDBERGER, Passed Assistant Surgeon, United States Public Health Service.

At the meeting of the Southern Medical Association in Jacksonville November 12-14, 1912, a number of interesting papers having public health bearing were presented. Of very special interest was a paper presented by Dr. J. E. Paullin of Atlanta, Ga., on typhus fever. In this paper Dr. Paullin reports seven cases of typhus observed in Atlanta since 1910. The features of these cases are summarized by him as follows:

TYPHUS FEVER IN ATLANTA, GA.

Onset has been sudden, with chills, as a rule; intense aching pain in back and limbs; persistent and intense headache, in two cases severely distressing to the patient, and remaining throughout the course of the disease; delirium was present in one case; prostration has been quite marked in all of the cases. The eyes are generally bright and shiny, the face flushed, tongue heavily coated; between the fifth and eighth day of the disease the characteristic eruption appears first on the chest and abdomen, rapidly spreading to the back, arms, forearms, hands, neck, face, legs and feet, although it is stated that frequently it is absent from the face. The rash resembles somewhat the typhoid roseola; it is more extensive and of a brighter color, maculopapular, varying in size from 1 to 12 mm. in diameter, appearing rapidly over the body, becoming petechial in places and not completely disappearing under pressure. In these cases the rash had completely disappeared before the subsidence of the fever, leaving behind a darkish brown discoloration, which soon disappears. The rash has not been observed on the buccal mucosa. No subcuticular flushing has been noted in these cases.

The temperature is high from the onset and having within the first few days reached its fastigium maintains this with very slight remissions for 10 to 15 days, when it ends by lysis or crisis. With a normal temperature the patients feel well, and headache disappears. The pulse is, as a rule, full, good volume, occasionally dicrotic; slow in comparison with the height of fever.

The spleen has been palpable at the first examination in all of the cases except one, the percussion area of splenic dullness is here increased. The border is hard and firm. The largest spleen—Case VI—extended 3.0 cm. below the costal margin. All of the cases have shown a slight leucocytosis, the highest count 12,400—the lowest 7,000. Repeated widow with the *Bacillus typhosus* and *Bacillus paratyphosus* have been negative. Blood cultures have been made on all cases except the first two, all remaining sterile.

Most patients have had a slight bronchitis at the beginning of the disease, and in two it persisted throughout its course.

There have been no relapses in these cases and no complications.

This paper is of very great practical importance because it emphasizes what Dr. Anderson and myself have several times stated—that typhus fever is endemic in the United States, a fact which physicians and sanitarians do not as yet sufficiently appreciate.

Two other papers of wide practical public-health interest were presented in the section on preventive medicine, one "The present

status of our knowledge regarding the transmission of typhoid fever," by Dr. A. W. Freeman, and the other, "Fly-borne typhoid fever and its control in Jacksonville," by Dr. C. E. Terry. These two papers are of such wide sanitary interest that I would recommend their publication in the Public Health Reports and herewith transmit copies of them for that purpose.

THE PRESENT STATUS OF OUR KNOWLEDGE REGARDING THE TRANSMISSION OF TYPHOID FEVER.

By ALLEN W. FREEMAN, M. D., Assistant Commissioner of Health of Virginia.

With the possible exception of tuberculosis, there is no disease in all the long catalogue of those classed as infectious which has been more studied than has typhoid fever. Both diseases present complex epidemiology, and in both effective practical prevention has come only after long and arduous study. The epidemiology of typhoid fever has become more complex as our knowledge has increased. The infectious agent of the disease can survive for a long enough time and under sufficiently varied conditions to render the study of its transmission difficult in the extreme.

Prior to the discovery of the specific etiological agent of typhoid fever the studies which were made were for the most part fragmentary and unsatisfactory, and until the time of Budd, whose immortal work has never received the recognition which it deserves, nothing of great value in the specific prevention of the disease had been recorded. Budd, whose researches will always remain a model for pure epidemiology, clearly established the infectious nature of the disease, located the infectious agent in the excreta of the patient, and laid the foundation for our modern ideas regarding the disease. The discovery of the infectious agent, coming shortly after the publication of Budd's work, gave great impetus to the prevention of typhoid fever, and from that time to this the history of sanitary science records a continuous series of triumphs over the disease.

At the present time, in summing up our knowledge regarding typhoid fever, we may say without hesitation that it is caused by the *Bacillus typhosus* of Eberth. The work of Metchnikoff and Besredke, together with the results of antityphoid vaccination, have disproved forever the theory so frequently advanced that typhoid fever is of the same nature as swine cholera, and the typhoid bacillus only a secondary invader, the real infectious agent being a filterable virus to be found in the blood.

We may say, too, with certainty that the typhoid bacillus is of much wider distribution than was thought, even up to a few years ago. It is to be found in the discharges not only of the patient, but of many healthy persons, who may or may not have had the disease, and in

the discharges of many persons who are sick with intestinal fevers so mild as to bear little or no clinical resemblance to true typhoid fever.

We have learned within the past few years that the typhoid bacillus is disseminated, not only as was formerly thought, by water and milk, and occasionally by other foods, but also by flies and fingers and in fact by almost any material object which comes in contact with human filth, and directly or indirectly with human mouths. We have learned by sad experience that the measure of typhoid fever in any community is the measure of the distribution of human filth in that community, and that the dissemination of human excrement will inevitably result in the spread of typhoid fever.

Water has, of course, long been regarded as the great carrier of typhoid infection, and rightly so. Sometimes in epidemics, sometimes in the continuous infection of a large population, sometimes in scattering single cases, water must be held responsible for a considerable proportion of our typhoid. Without adequately protected or purified public and private water supplies, typhoid prevention is impossible.

Milk has, likewise, for many years been regarded as a most important vehicle for typhoid infection. Epidemics without number have been caused by infection of milk supplies. Experience, dearly bought, has demonstrated that even the most rigid inspection of milk supplies can not prevent the occasional infection of a public supply, and that real protection against typhoid fever from infection of milk supplies is to be purchased only at the expense of pasteurization under municipal supervision.

Other food causes of typhoid infection have received much attention, but in spite of much study little has been learned as to their real importance. We have seen much agitation of recent years in regard to the rôle played by shellfish, and particularly oysters, in the transmission of typhoid. A careful study of the evidence would seem to show that while an occasional outbreak of typhoid has been found to be due to infection of oysters, in such cases the pollution has been obvious and inexcusable, such as the fattening of oysters in the harbors of large cities or even at the mouths of sewers. We believe that for the most part the average market oyster is not the cause of any great proportion of our typhoid and is in fact about as safe as any of the foods which we are in the habit of eating uncooked.

TYPHOID FEVER IN CITIES AND TOWNS.

The studies which have been made of the prevalence of typhoid fever in the cities and towns of the United States have revealed much that is of value in the prevention of the disease. The relative value

of water purification, general sanitation, and food protection has been worked out in detail and the practical prevention of the disease has been made almost an exact science.

Everyone knows that frequent explosive outbreaks of typhoid fever have occurred as a result of the infection of public water supplies. From such supplies the typhoid bacillus has been recovered so frequently as to leave no doubt of the accuracy of the results. It has been proved too many times to admit of further question that the use of an impure water supply by a community will result in a continuously high typhoid rate, and that purification of such a water supply will result in a marked and immediate lowering of the rate.

In cities in the more northern sections of the United States the purification of a public water supply of a city will result in the reduction of the annual typhoid death rate to a figure usually under 20 per hundred thousand. In the South the purification of the public water supply will in the absence of other measures seldom bring the figure below 50 per hundred thousand. In a southern city, possessing a pure public water supply, the sanitation of the city, and by sanitation is meant the complete protection from human filth in the community by perfect sewerage or by rigid screening and supervision of dry closets, will usually result in reducing the annual typhoid death rate to the figure usually reached by the northern city from water purification alone, namely, 20 per hundred thousand. Unfortunately no figures are available as to the result of the perfect sewerage of any southern city of considerable size, as, so far as we are aware, such a city is not to be found.

No more important addition has been made to our knowledge of the practical prevention of typhoid fever in urban communities than the facts which have come to light regarding the importance of protecting the people of any community against that infection which is not brought in from without the city gates but which is generated within and disseminated from foci close at hand. When we seek to work out a plan of protection for the citizens of any community against typhoid fever we should classify accurately our sources of infection into two groups. We should first consider those sources of exogenous infection without the city, from which infection is brought in, usually in water, milk, or other food, and which are guarded against by water purification and milk and food inspection. We should by no means neglect those sources of endogenous infection within the city, whence typhoid is distributed by an almost infinite variety of means, and which must be guarded against by what we speak of as general sanitary measures, such as sewerage, sanitary inspection, fly prevention, and, in addition, by the very especial supervision of the known cases of typhoid fever.

TYPHOID FEVER IN RURAL DISTRICTS.

It is to be regretted that our knowledge regarding the transmission and prevention of typhoid fever in rural districts is far from being as complete as that regarding urban conditions. The subject is one which has been studied but little in this country, notwithstanding the fact that in many of our States typhoid fever is almost entirely a rural problem. We have learned, however, some facts regarding the transmission of typhoid fever in rural districts which are of value in practical prevention. We know that in most cases water infection has but little to do with the spread of the disease; that existing sanitary conditions in rural districts are utterly inadequate for the proper protection against human filth; and that the general dissemination of fecal matter consequent upon the presence of these insanitary conditions is inevitably followed by the presence of typhoid fever.

We know, too, that the country people at the present time have not learned those precautions which are absolutely necessary to prevent the spread of the disease from the bedside of the patient, and that frequently the disease is spread over large areas of country by contact alone. From our knowledge of the transmission of typhoid fever, taking into account the isolation and lack of intercommunication of the country people, we may confidently expect that an improvement in the sanitary arrangements of our farms, specifically in the building of a sanitary privy for every home and a more careful observance of the precautions of the sick room, will result in a marked decrease in the prevalence of typhoid fever in rural districts.

ANTITYPHOID VACCINATION.

The results already obtained indicate clearly that vaccination with killed cultures of the typhoid bacillus confers upon the individual marked resistance to typhoid infection. In military organizations the great value of this method of protection has already been demonstrated, and results are rapidly accumulating to show that in civil populations the method may also be of great service in the prevention of endemic and possibly of epidemic typhoid.

SUMMARY.

Summing up, we may say that the essential basis for the prevention of typhoid fever has been laid, and that we are now in possession of the information, biological and technical, necessary for the actual eradication of the disease from the urban communities of the United States. The basis for prevention in rural communities, while not complete, is sufficiently certain to insure a great reduction in present rates. The problem is no longer an investigative or scientific problem, but a problem of administration. When the people of the

United States wish to pay for absolute protection against typhoid fever it can be bought with the full assurance that the goods can be delivered.

CONCLUSION.

As physicians and sanitarians, we are most interested in the practical question, Can typhoid fever be prevented? We know that it can. We know that our methods are certain, that they will yield the desired result in every case where they are properly applied. The problem remaining for solution is how to convince the American people that protection from typhoid fever is something worth spending money for.

FLY-BORNE TYPHOID FEVER AND ITS CONTROL IN JACKSONVILLE.

By C. E. TERRY, M. D., City Health Officer, Jacksonville, Fla.

It is not my intention in this paper to present any new facts regarding the carriage of typhoid fever by flies nor to make any valuable contribution to the literature on fly transmission of intestinal diseases, but rather to state an experience which is unique, I believe, in municipal sanitation.

The source of the water supply of Jacksonville, as well as systematic bacteriological examination of this supply, have enabled us, we feel, to completely eliminate it as a factor in the spread of our typhoid fever. The entire absence of open wells, owing to a city ordinance prohibiting them, removes such source of water supply from consideration. The only other water supply that could have been questioned in individual cases are the driven surface wells, and here again local conditions, namely, a perfect sand filter, which our soil furnishes naturally, has enabled us, after repeated examinations for possible sewage contamination of these wells, to disregard them as factors in the spread of this disease.

The city water is artesian from flowing wells of an average depth of a thousand feet. As it issues from these wells it is practically sterile, and outside of contiguous breaks in sewer and water mains there appears no opportunity for its contamination. No facts connected with any of our cases of typhoid fever would indicate that such an accident had ever occurred. Below is a table of the bacterial counts taken from reservoirs and taps in different portions of the city for the past three years. It will be seen from a perusal of this table that our supply is of unusual purity.

Bacteria in city water during 1910, 1911, and 1912.

Source of sample.	Number of samples.	Average number bacteria per c. c.	Bacillus coli.
City taps.....	26	20	Absent.
Reservoir.....	21	22	Do.
New reservoir.....	1	10	Do.
Reserve basin.....	9	116	Present.
South aerating basin.....	9	19	Absent.
North aerating basin.....	8	38	Do.

The average of all counts is 23 bacteria per cubic centimeter, exclusive of reserve basin. This basin is called upon only in case of emergency, such as large fires. It lies near Main Street and is uncovered. Twice *Bacilli coli* have been found in it, due probably to dust from the street and birds. In none of the other basins have we ever found the colon bacillus.

Together with the elimination of the water supply as a possible carrier of our typhoid fever, I have been able, since January, 1910, to eliminate milk as a factor, with the exception of three cases during the spring of the present year. The milk supply of every case occurring since January 1, 1910, has been determined, and in no instance has there been reason to believe that any milk route was at fault. In fact, only 16.6 per cent of all cases during 1911 and 1912 used any cows' milk prior to the onset of the disease. Since January, 1911, a case record has been kept of all the local conditions surrounding each case, such as milk and water supply, location as to privy or sewer district, recent contact with known cases, eating places, screening, etc.

With the elimination of water and milk, ordinarily the two main factors in the distribution of typhoid fever, it became apparent that some other common condition must be sought in order to account for the undue prevalence of the disease. There remained in my mind but two possibilities worthy of much consideration—contact cases and those due to fly carriage. My attention was first called while I was doing general practice in this city, prior to my appointment as health officer, to the possible agency of the fly, principally by the seasonal incidence of the disease. After my appointment, January 1, 1910, the distribution of the cases was found to be such as to corroborate this belief.

The conditions existing in the privy district at that time were such as to further in every way fly transmission of intestinal diseases. There were about 8,500 privies in the city which accommodated 40 per cent of our population. Had these privies been confined to any particular locality their existence would not have entailed such a widespread distribution of infection; but they were about evenly

distributed throughout every section of the city. In fact, there was at that time no point within the city limits of Jacksonville farther than nine blocks from one or the other of the privy districts, while about 75 per cent of the population lived either in this district or within three or four blocks of it, notwithstanding the fact that their own premises may have had sewer connections.

These 8,500 privies were such as are commonly seen in rural districts, and I can truthfully say that not a single one made the slightest pretense of protection against flies; indeed, so poorly were they constructed that many had no backboards and more than one householder objected to the visit of the city scavenger on the grounds that the chickens did his work to the entire satisfaction of the family. Few had seat covers, all had wide cracks and unscreened windows and many of these privies in the poorer negro settlements lacked even doors, denying to the occupant the privacy which the name would indicate could we rely on etymology for meaning. A large proportion of these privies existed in thickly settled districts where only a few feet separated the cottages and where small yards required the placing of the privy close to the kitchen windows. In many instances, where a number of houses were owned by the same landlord, to economize space and money one community privy would be found within 25 or 30 feet of from three to six kitchens. Screens are not furnished to this class of tenants. Each privy was a reeking mass of filth swarming with flies which abandoned it only when the odor of cooking attracted them through the near-by windows. Surely here were present the three essentials to fly carriage of intestinal diseases—exposed human excrement, unprotected food supplies, and an abundance of flies. Ignorance and disregard for decency could scarcely have devised more ideal conditions for the dissemination of intestinal infections.

I regret that prior to 1910 scarcely any case reports were made to the health office, so that I can not determine the distribution of the disease before that period. The deaths, however, furnish sufficient information to show that its seasonal prevalence was the same as for the past three years. In 1910 we had a considerable increase in the number of deaths over the preceding two years. I attribute this increase in part to more accurate data and to the fact that the city had grown so rapidly during this period that sewerage extension lagged far behind the requirements and each year the number of new privies constructed outnumbered the new sewer connections. At the same time in default of any law governing the construction and maintenance of these places, the old ones were falling constantly into a worse state of repair.

During 1910 our attention was early called to the distribution of the cases and it was also noted that a marked increase occurred after

the onset of the fly season. Careful observations on the prevalence of flies were made during this season about the public dumps and stables and it was found that they reached their height about the end of the first week in July, while the same month furnished the high-water mark of the typhoid cases reported.

Acting on this, we succeeded, in August, 1910, in securing the passage of an ordinance requiring all privies to be rendered fly proof. This ordinance was modeled after the one devised by Dr. Levy, of Richmond. Its enforcement was begun at once, and by April 1, 1911, the beginning of the fly season, between 80 and 85 per cent of all privies had been reconstructed according to its requirements. The ordinance required tight construction, the screening of ventilating openings, self-closing doors and seat covers, and well-fitting hinged backboard. In order to avoid, as far as possible, imposing unnecessary hardships upon property owners, the law was so framed as to permit the repairing of privies already constructed where it was possible in this manner to insure fly proofing. Where, however, such repairs would not have accomplished the desired result entire new construction was required.

Beginning with January, 1911, the department has required that the sick room in every case of typhoid fever be screened and the flies destroyed by means of poison or sticky fly paper. This routine has been carried out by detailing an inspector to visit each case every other day from the time of its reporting until convalescence is established. Where the financial condition of the family renders the screening of the sick room a hardship, mosquito netting, sticky fly paper, and disinfectants have been furnished by this department and their use has been strictly enforced and watched. Printed instructions supplement verbal ones in each case.

As a result, I believe, of the screening of the privies and sick rooms the number of cases of typhoid fever reported to the health department during 1911 was 158 against 329 for 1910, the deaths for the same years being 40 against 62. There was actually a greater reduction in the number of cases, as the reports for 1911 were more complete than those of 1910. Not only did this reduction occur, but we found that the distribution of the cases as to privy or sewer districts was practically reversed in 1911 from that of 1910, showing no disproportion of cases in the privy districts. The 1911 cases were distributed according to the population, regardless of methods of sewage disposal.

It is interesting to note that of the 158 cases occurring in Jacksonville during 1911, 88, or 55 per cent, were imported, the large majority from the surrounding country districts, where the privy and "back lot" unite to solve the question of sewage disposal. A large proportion of these cases are imported in the summer from rural communities where typhoid fever is continuously epidemic. In all of

these settlements open privies are used. During 1911 the enforcing of the privy ordinance was vigorously pushed and by January, 1912, these places were in as nearly a sanitary condition as it is possible to keep them where 50 per cent of the population is composed of negroes devoid of responsibility, and others of the type which looks with ridicule upon the necessity for care in the disposition of human excrement, or is too indifferent to matters concerning the public welfare to observe more than the naked letter of the law.

The enforcement of this ordinance has cost property owners a large amount and it was not accomplished without considerable opposition from various sources, but the results obtained have removed most of the objections and during the past year notices to repair or reconstruct dilapidated privies have generally met with prompt, if not always cheerful, response.

The most marked reduction in the typhoid case rate has taken place this year. At the present writing we have had only 87 cases reported with 16 deaths. Of these, 48 acquired their infection elsewhere and were brought here for treatment. In only 39 cases could the infection be charged to Jacksonville. Three of these cases and one death were due to infected milk of a privately owned cow which supplied three families, a needless sacrifice to ignorance.

I am fully aware that the facts above stated do not furnish all the requirements of strictly scientific proof that our typhoid fever was for the most part fly borne, but it would appear that this was the case, as the only measures we have made use of to reduce our typhoid rate have been directed against this insect, and the only change in sanitary conditions throughout the city has been the fly proofing of the privies. Contact has undoubtedly played its part, as it does everywhere, but in view of the fact that our water and milk supplies could be eliminated, as already stated, I feel that we are justified in attributing the major portion of our cases, prior to the enforcement of the privy law, to the house fly.

There arises, in this connection, a point of considerable scientific interest, namely, just how the disease is transmitted by the fly. We have been taught that the fly infects food by means of the specific bacilli carried on its feet from infectious material. The commission appointed to investigate the causes of typhoid fever prevalence during the Spanish-American War call attention to the fact that flies "with their feet whitened with lime from the latrines" were seen walking over the food of the soldiers in the mess tents and kitchens. It has also been demonstrated by several investigators that flies fed on infected material will deposit the typhoid bacillus in their specks. Maj. N. Faichnie, Royal Army Medical Corps, in the November (1909) number of the Journal of the Royal Army Medical Corps, presents a most interesting paper on the exact source of this infection.

It is his opinion that neither the legs of the flies "nor their excreta when they feed on the contents of latrines are common vehicles of fly-borne infection"; quoting further from Maj. Faichnie:

But, on the other hand, the chief and most common method is by excrement when the flies are bred in an enteric infected material. By this I mean that one station may swarm with flies, bred only from the excreta of cows and horses, and yet have no enteric; while another place, where there are very few flies, but where these are bred from human excreta either in or out of the station, may have an epidemic, the source of infection being the excrement of the flies, and the insects themselves being carriers.

Maj. Faichnie, in his report, adduces considerable evidence to support his contention. In view of his observations and some experiments which Dr. McKay and I conducted in 1911, I am inclined to believe, at least, that the fly bred in infectious material is a carrier for a longer period and hence more dangerous than the insect obtaining its infection through contact or feeding after maturity. It is a matter that is worthy of careful investigation. The fly-proofing of privies, however, is protection against either mode of infection, and I am convinced from inspections made of these places prior to the passage of our screening ordinance that, second only to stables, they furnished the most prolific fly hatcheries in the city.

What is true of Jacksonville is, I believe, true of many of our southern towns and cities, where the sewerage systems are inadequate to the requirements and where the old type of privy is in common use, and in such communities I am convinced the screening of these places will bear fruit in reducing the typhoid-fever rate, as it has done in Richmond, Asheville, and this city. The old type of privy is an abomination, and even the best is but a poor substitute for the sewer; but in the South, where lack of public funds, the poverty of large numbers of our people, and, as everywhere, politics retard sewerage extension, and where climatic conditions prolong the fly season, the rendering fly-proof of these places is a necessity if we would secure even reasonable immunity from the infections they entail.

SANITARY LEGISLATION.

STATE LAWS AND REGULATIONS PERTAINING TO PUBLIC HEALTH.

ARIZONA.

Control of Communicable Diseases—Duties of County and City Health Officers—Sanitation of Dairies and Schools. (Regulations Territorial Board of Health, approved Aug. 1, 1911.)

AUTHORITY FOR REGULATIONS.

Under authority of section 4, paragraphs 3 and 8, chapter 65, of the Session Laws of the Twenty-second Legislative Assembly of the Territory of Arizona, and section 1, chapter 76, of the Session Laws of the Twenty-fifth Legislative Assembly of the Territory of Arizona, the following regulations for the control of communicable diseases; further defining the duties of county superintendents of public health and city health officers, and of local and county registrars of vital statistics; requiring additional information as to the places where diseases causing death have been contracted, or injuries resulting in death received; regulating the sanitation of dairies and of schools and the construction of school buildings, are hereby adopted, and the regulations adopted by the Territorial board of health on April 22, 1903, are hereby repealed:

CHAPTER I.

CONTROL OF COMMUNICABLE DISEASES.

SECTION 1. The following diseases are hereby declared to be communicable and dangerous to the public health, viz: Bubonic plague, chicken pox, cholera (Asiatic or epidemic), dengue, diphtheria (diphtheritic croup, diphtheritic sore throat), German measles, hydrophobia (rabies), leprosy, malarial fever, measles, relapsing fever, scarlet fever (scarletina, scarlet rash), smallpox (variola, varioloid), typhoid fever, typhus fever, whooping cough, and yellow fever, and shall be understood to be included in the following regulations, unless certain of them only are specified.

SEC. 2, PAR. 1. Every physician who shall know or suspect that any person, requiring his or her services professionally, is suffering from any of the diseases named in section 1, shall forthwith make report in writing to the local board of health, upon blanks to be furnished for that purpose by the local board of health. The report shall be personally signed by the physician and shall contain such items of information as are indicated on the blanks aforesaid. Cases merely suspected shall be reported as suspicious, or suspected cases, and the local board of health shall be notified promptly upon a definite decision being made as to the nature of the disease.

PAR. 2. In case of Asiatic cholera, bubonic plague, smallpox, and yellow fever, in addition to the card report, the local board of health shall be immediately notified, by the most expeditious method (telephone, telegraph, messenger) and the executive officer thereof shall, except for smallpox, immediately notify the secretary of the Territorial board of health by telephone or telegraph. Like immediate notice, in

addition to the card report, shall also be given to the local board of health of primary cases in a community, of any of the following diseases, viz: Chicken pox, diphtheria, measles, scarlet fever, and whooping cough.

SEC. 3. Every keeper of any private house, boarding house, lodging house, inn, or hotel, who shall know or suspect that any person, boarder, lodger, guest, tenant, or other occupant of premises owned, conducted, managed or supervised by him or her, or any member of his or her family, is suffering from any of the diseases named in section 1, shall forthwith make report in writing to the local board of health: *Provided*, That where a physician or other person has professionally attended such a person, the responsibility of such report shall devolve solely upon the physician or person so attending.

SEC. 4. Every health officer and every county superintendent of public health shall, upon receiving a report of any case of any disease named in section 1, forthwith make such inspection and examination as may be necessary and make report in writing to the secretary of the Territorial board of health upon blanks to be furnished for that purpose. Said report shall contain such items of information as are indicated on the blanks provided for report in such disease. Such health officer or county superintendent of public health shall notify immediately the school authorities of the existence of each case of any of the diseases mentioned in sections 9 and 10 of these regulations.

SEC. 5, PAR. 1. The term "absolute quarantine" as used in these regulations shall be construed to mean and include, first, absolute prohibition of entrance to or exit from a building or conveyance except by officers or attendants authorized by the health authorities, and the placing of guards, if necessary, to enforce this prohibition; second, the posting of a warning placard, stating the name of the disease, in a conspicuous place or places on the outside of the building or conveyance; third, the prohibition of the passing out of any object or material from the quarantined house or conveyance; fourth, provision for conveying the necessities of life, under certain restrictions, to those in quarantine.

The following diseases shall be placed under absolute quarantine: Bubonic plague, cholera, smallpox, and yellow fever, and the quarantine shall be continued until raised by an authorized agent of the board of health.

PAR. 2. The term "modified quarantine" as used in these regulations shall be construed to mean and include, first, prohibition of entrance and exit, as in absolute quarantine, except against certain members of the family authorized by the health authorities to pass in and out under certain definite restrictions; second, the placing of a placard or placards as under absolute quarantine; third, isolation of the patient and attendants. The wage earner is allowed, under modified quarantine, to continue work provided he at no time comes in contact with the patient, and that he has and uses facilities for thoroughly cleansing his hands immediately before leaving the premises. In permitting householders and wage earners to continue work when their premises are under modified quarantine, it shall be understood that such persons shall not be employed in an establishment maintaining the production, sale, or manufacture of candy or food products, including milk and ice cream; nor shall such person be employed as a teacher of children nor in any other capacity that brings them in intimate contact with children.

The following diseases shall be placed under modified quarantine: Diphtheria, measles, and scarlet fever: *Provided*, That where, in the judgment of the city health officer or the county superintendent of public health, the health of the community will be endangered by permitting the liberties of modified quarantine, he may, at his discretion, institute absolute quarantine.

PAR. 3. The following diseases in addition to those requiring absolute and modified quarantine shall be placarded and dated: Chicken pox, German measles, mumps, whooping cough, typhoid fever, and leprosy.

PAR. 4. All the diseases named in this section shall be subject to such special instructions as may be provided by the secretary of the Territorial board of health and the placards used shall conform to those described below and be known as placard Forms 1, 2, and 3, respectively. Houses from which cases of variola or varioloid are reported shall be placarded as smallpox. Houses from which cases of membranous croup or diphtheritic croup are reported shall be placarded as diphtheria.

Form 1 shall be not less than 6 inches wide, 9½ inches long, and shall bear the name of the disease in letters not less than 1 inch high. The wording shall be as follows:

"Until this placard is legally removed, all persons not occupants of these premises are forbidden to enter. No person may leave this house or remove any article therefrom except by permission of an authorized agent of the county (or city) board of health."

It shall bear the name of the local board of health or of its executive officer as such.

Form 1 shall be used for smallpox, scarlet fever, measles, diphtheria, Asiatic cholera, bubonic plague, typhus fever, and yellow fever.

Form 2 shall be of the same size and bear the name of the disease in letters of the same height as Form 1. It shall be worded as follows:

"All persons are notified of the presence of this disease and on account of its contagious character are warned against visiting or coming in contact with those sick with it."

It shall bear the name of the local board of health or of its executive officer as such.

Form 2 shall be used for chicken pox, German measles, mumps, and whooping cough.

Form 3 shall be not less than 5 inches wide and 8 inches long and shall bear the name of the disease in letters not less than three-fourths of an inch high. It shall be worded as follows:

"All persons are notified of the presence of this disease and are warned of the danger of coming in contact with the infection."

It shall bear the name of the local board of health or of its executive officer as such.

Form 3 shall be used for typhoid fever and leprosy.

SEC. 6. No case of any of the contagious diseases subject to absolute or modified quarantine shall be released from such quarantine prior to complete recovery, and in case of scarlet fever, a minimum period of quarantine of 30 days shall be observed; and in diphtheria a minimum period of 14 days from the disappearance of the membrane.

SEC. 7. Persons permitted access to and exit from households under modified quarantine shall abstain from attending places of amusement, worship, or education, and, as far as possible, from visiting other private houses.

SEC. 8. No child or other person infected with any of the following diseases belonging to or residing with the family, or any person residing in the same house in which any person may be located who is infected with any of the following diseases, namely: Cholera, smallpox (variola, varioloid), scarlet fever, typhus fever, yellow fever, diphtheria (diphtheritic croup, membranous croup), measles, or whooping cough shall be permitted to attend any public, private, parochial, Sunday, or other school in this territory, and all principals, Sunday school superintendents, or other persons in charge of such schools are hereby required to exclude any and all such children and persons from such schools, such exclusion to continue for a period of 12 days following the discharge by recovery or death of the person last afflicted in said house or family, or his or her removal to a hospital, and a thorough cleansing of the premises; and all such children or persons as aforesaid, before being permitted to attend or return to school shall furnish to said principal or other person in charge of said schools a certificate signed by the medical attendant of said children or persons or by a physician to be designated by the health authorities of such locality, setting forth that the 12 days mentioned in this section have fully expired: *Provided, however,*

That the health authorities may provide by rules and regulations that such certificate shall be given only by a person to be designated by such authorities, and in such case no other certificate shall be recognized.

SEC. 9, PAR. 1. No child or other person who is suffering from German measles, mumps, or chicken pox shall be permitted to attend any public, private, parochial, Sunday, or other school; and all principals, Sunday school superintendents, or other persons in charge of such schools are hereby required to exclude any and all such children and persons from said schools prior to the receipt of a certificate of recovery issued by the health officer, or his accredited agent, following the receipt of the physician's certificate of recovery.

PAR. 2. Other persons living in households where the diseases mentioned in this section exist may be readmitted to school at the end of 12 days from the date of onset of the disease, if well, and if they have not been exposed to the sick for that length of time, provided they present a permit issued in accordance with the provisions of this paragraph by the health officer.

SEC. 10. Pupils actually affected with the following diseases shall be excluded from school during the existence of the disease and shall be readmitted upon the physician's certificate attesting to the recovery of the patient, viz: Tonsillitis, scabies (itch), pediculus capitis (head lice), pediculus corporis (body lice), tinia circinata (ring-worm), impetigo contagiosa, favus, acute contagious conjunctivitis, trachoma, and erysipelas.

SEC. 11, PAR. 1. During the presence of measles in a community (school district), pupils affected with acute coryza or "cold in the head," or with acute bronchitis or "cold on the chest," and during the presence of scarlet fever or diphtheria, pupils affected with any form of inflammation or soreness of the throat shall be deemed to be in the prodromal stage of such disease as may be present or prevalent and subject to all the restrictions applying thereto.

PAR. 2. Principals and teachers shall take particular note of pupils at such times, and the exclusion of those found suffering from "colds" must be immediate and continue until either the pupil be found not to be suffering from a disease mentioned in section 8 or until the regular period of exclusion as provided by these regulations shall have elapsed.

SEC. 12. The minimum periods of school exclusion, calculated from date of onset, shall be as follows: For smallpox, 30 days; scarlet fever, 2 months; diphtheria, 21 days.

SEC. 13. School-teachers boarding or residing with a family in which any disease subject to quarantine is known or suspected to exist, shall immediately remove to premises not so infected, and provided they have not been actually exposed to diphtheria, scarlet fever, or smallpox, may be allowed to continue their attendance at school.

SEC. 14. The head of a family occupying any house, apartment, or premises, or the proprietor of any hotel, boarding, lodging, or tenement house upon or near which a placard or placards are placed, shall not remove, deface, cover up, or destroy such placard or placards, nor shall other persons unauthorized by the local boards of health remove, deface, cover up, or destroy such placard or placards, and if through accident, atmospheric conditions, or otherwise, said placard or placards shall be destroyed, removed, or defaced, the householder or proprietor shall at once notify the health authorities of that fact.

SEC. 15. No person shall let or hire any house, or room in a house, in which a communicable disease required to be placarded has recently existed, until the room or house and premises connected therewith have been cleaned to the satisfaction of the local board of health; and for the purpose of this section the keeper of a hotel, inn, or other house for the reception of lodgers shall be deemed to let or hire part of a house to any person admitted as a guest into such hotel, inn, or house.

SEC. 16. All dogs, cats, and pet animals kept about premises infected with any disease requiring absolute or modified quarantine shall be rigidly excluded from the house until after the raising of the quarantine.

SEC. 17. Whenever there shall exist, in the opinion of the Territorial board of health, imminent danger of the introduction of a contagious or infectious disease into the Territory of Arizona, by means of railroad communication with other States, the board of health may, and it is hereby made its duty, to make or cause to be made, under the direction of the superintendent of public health, an inspection of all railroad cars coming into the Territory at such point, or between such points within the Territorial limits as may be selected for the purpose. Such inspection shall be made, where practicable, during the ordinary detention of a train at a station, or while in transit between stations, and in all cases shall be so conducted as to occasion the least possible detention or interruption of travel or inconvenience to the railroad companies, so far as consistent with the purpose of this rule. Should the discovery be made of the existence among the passengers, of any case or cases of dangerous, contagious or infectious diseases, the said board of health or the superintendent of public health, under the rules and conditions prescribed for them as being applicable to the nature of the disease, shall have the power to cause the sidetracking or detention of any car or cars so infected, to isolate the sick, or remove them to a suitable place for treatment, to establish a suitable refuge station, to cause the passengers and materials in such infected cars to be subjected to disinfection and cleaning before proceeding further into the Territory, and, in case of smallpox, to offer free vaccination to all persons exposed in any car or at any station.

SEC. 18. Upon the removal to a hospital or other place, or upon the discharge by recovery or death of any person or persons who have suffered from bubonic plague, cholera, diphtheria, leprosy, measles, scarlet fever, smallpox, typhoid fever or typhus fever, the premises where said diseases existed, together with the bedding, clothing, and other articles exposed to infection, shall be disinfected by cleansing, or cleansing and fumigation, to the satisfaction of the local board of health.

CHAPTER II.

DUTIES OF COUNTY AND CITY HEALTH OFFICERS.

SECTION 1. Each county superintendent of public health shall, on the 10th day of every month, report to the secretary of the Territorial board of health, on blanks provided for that purpose, the proceedings of the county board of health and his official acts for the preceding month. Such report shall include the following facts for the preceding month:

- (1) The number of premises from which quarantine has been raised or restrictions removed.
- (2) The number of cases of each disease mentioned in chapter I, section 1, existing in his county on the last day of the preceding month.
- (3) The number of dairies, slaughterhouses, butcher shops, bakeshops, restaurants, boarding houses, hotels, and rooming houses inspected.
- (4) The number of schools, jails, almshouses, hospitals, and other public buildings inspected.
- (5) The number of corrals, stables, tanneries, hide houses, bone-boiling establishments, and other offensive trades or businesses inspected, the conditions found, and changes ordered.
- (6) The number of premises, including yards, privies, cesspools, sewer connections, private stables, middens, garbage cans, etc., inspected, the number condemned, ordered destroyed, cleaned, or otherwise changed.
- (7) The number of stagnant pools found, the number ordered drained, filled, or otherwise rendered unfit for the propagation of mosquitoes.

(8) Any violations of the public health act of March 19, 1903, of the vital-statistics act of March 18, 1909, of sections 331-338, inclusive, of the penal code, and of the regulations of the Territorial board of health and the number of arrests and convictions thereunder.

SEC. 2. Each city health officer shall, on the 5th day of every month, report to the secretary of the Territorial board of health for the preceding month. Such report shall include the following, in addition to the facts required in paragraphs 1 to 8, inclusive, of the preceding section:

(1) The installation of any extensions or modifications of the sewerage system.

(2) The installation of, or any changes or extensions or additions to, the public water supply.

(3) The installation or any changes or extensions of the systematic collection or disposal of garbage and other city wastes. If possible, a map should accompany a report of anything included in this and the two preceding paragraphs.

SEC. 3. Each county superintendent of public health shall as often as once a year inspect each unincorporated town, village, mining or other industrial camps having an estimated population of 100 or more within his county. Such inspection shall include: The schools, dairies, slaughterhouses, butcher shops, bakeshops, restaurants, boarding and rooming houses and hotels; the stables, corrals, hide houses, and other offensive trades and businesses; the water supply, sewage and garbage removal and disposal; the sanitary condition of the streets, alleys, vacant lots, ditches, yards, and any public nuisances as defined by these regulations or by the statutes of the Territory. He shall serve notice on all persons responsible for conditions inimical to the public health or public comfort, and shall give copies, or a list, of such notices to the constable of the precinct, with instructions to see that the changes are made in accordance with his orders. If considered necessary by him, a reinspection shall be made after a sufficient time, to see that the changes ordered have been carried out in good faith.

SEC. 4. County superintendents of public health and city health officers shall make such reports to the secretary of the Territorial board as may be required by said board, and shall answer promptly all letters of inquiry of said board or of its secretary. They shall keep on file all official correspondence received and copies of all letters and reports sent by them. They shall keep an accurate account of all expenditures made by their respective boards, and a report of such expenditures shall be made to the secretary of the Territorial board in such manner as he may prescribe.

SEC. 5. All reports, certificates, returns, and records required to be kept, returned, and reported by local boards of health shall be in accordance with such forms as shall be directed by the superintendent of public health.

SEC. 6. Every county superintendent of public health or city health officer on going out of office (or in case of his death, his legal representative) shall deliver to his successor in office all property, books, accounts, papers, and documents in his possession relating to or connected with his office or official duties. He shall also immediately notify the secretary of the Territorial board of health of the pertinent facts relating to his going out of office and inform him of the name and address of his successor.

CHAPTER III.

REGISTRATION OF BIRTHS AND DEATHS.

1. Each local registrar shall on the 5th of every month fill out and mail to the county registrar a monthly statement card, provided by the Territorial registrar for that purpose, showing the number of births and deaths reported to him for the preceding month or months, and transmitted by him to the county registrar: *Provided*, That from districts in which neither births nor deaths have been reported reports to that effect may be made upon the "No death" and "No birth" cards provided by the Territorial registrar.

2. In addition to the duties prescribed by section 20, act 75, session laws, 1909, each county registrar shall examine and verify the monthly statement cards received from local registrars and shall return for correction all incorrect statements. He shall inclose with the certificates transmitted to the Territorial registrar a statement of the number of certificates of death and birth inclosed with their numbers according to his county series, the number of local registrars' monthly statement blanks, no-death cards, no-birth cards, and the number of districts not reporting.

3. In addition to the information required by section 8, act 75, session laws, 1909, the person certifying to the cause of death shall, in case the death has been due to infectious disease as defined in Chapter I of these regulations, or to tuberculosis or violence, state where (geographically), in his opinion, the disease was contracted or injury received, and in the event that the State or foreign country in which such disease or injury was contracted or received is unknown to him, he shall specifically state whether or not, in his opinion, the disease or injury was acquired in Arizona. In the event of disease of the foregoing nature, or injury, having been acquired in Arizona, the physician shall specify as nearly as may be the county and the town, city, village, or camp.

4. Stillbirths of less than seven months' gestation shall not be reported. A child which shows any evidence whatever of life after birth shall not be registered as a stillbirth.

CHAPTER IV.

MILK—PRODUCTION, CARE, AND SALE.

SECTION 1. No building shall be used for stabling cows for dairy purposes which is not properly constructed, well lighted, well ventilated, and provided with a suitable solid floor of plank, cement, or other impervious material that can be readily cleaned, and laid with proper grades and channels to carry off all drainage.

SEC. 2. No water-closet, privy, cesspool, or urinal shall be located within any building or room for stabling cows, or for the handling or storage of milk or milk products. No inhabited room or workshop shall be located within 50 feet of any such building or room, nor shall any fowl, hog, horse, sheep, goat, or other animal be kept in any room used for milking or the storing of milk products.

SEC. 3. All rooms and stables in which cows are milked shall be thoroughly clean and in good repair, and shall be painted or whitewashed at least once a year.

SEC. 4. All manure shall be removed daily from the room or stable in which cows are milked, and shall not be stored where odors from the same shall be noticeable at the stable or milk room.

SEC. 5. All persons keeping cows for the production of milk for sale shall cause each cow to be kept clean and groomed.

SEC. 6. Every person using any premises for keeping dairy cows shall cause the yard or pasture in connection therewith to be provided with a proper receptacle for drinking for such cows, and none but fresh, clean, pure water shall be stored in such receptacle.

SEC. 7. Any inclosure in which cows are kept shall be graded and drained so as to keep the surface reasonably dry and to prevent the accumulation of water therein, and no garbage, urine, fecal matter, or other similar substances shall be placed or allowed to remain in such inclosure, and no open drain shall be allowed to run through it.

SEC. 8. All milk shall be removed, as soon as drawn, from the stable to the milk room. The milk room shall be separate from the stable in which the cows are kept and shall not be used as a living or sleeping room, but shall serve for the handling of milk and cream exclusively. It shall be sanitary in construction, properly screened, supplied with proper ventilation, light, and pure water, and suitable facilities for

straining, cooling, and storing milk or milk products, and for washing and sterilizing all utensils and apparatus in which milk is removed, stored, and delivered.

SEC. 9. All utensils used for the reception, storage, or delivering of milk or cream shall be made of glass, stoneware, glazed metal or tinplate free from rust and of sanitary construction, and such utensils shall not be used for any other purpose.

SEC. 10. All cans, pails, strainers, coolers, dippers, separators, bottles, churns, butter workers, and other dairy utensils shall be cleaned from all remnants of milk and scalded with boiling water or live steam after each use.

SEC. 11. All milk or cream cans delivered to creameries or dealers in cities shall be covered with tight fitting lids, and when conveyed in open wagons shall be covered with clean canvas while being so conveyed.

SEC. 12. No person, firm, association, or corporation buying, storing, or receiving milk for the purpose of selling the same for consumption as such, or for manufacturing it into butter, cheese, ice cream, condensed milk, or other human food, shall keep the same in utensils, cans, vessels, or rooms that are unclean, or have insanitary surroundings or drainage or under conditions favorable to unhealthfulness or disease, and milk to be sold for consumption as such, within one hour after receiving the same shall be cooled to a temperature not higher than 60° F., and shall be kept at such temperature until delivered.

SEC. 13. Every person engaged in the production, storage, transportation, sale, delivering, or distribution of milk, immediately on the occurrence of any case or cases of infectious disease, either in himself or his family or amongst his employees or their immediate associates, or within the building or premises where milk is stored, sold, or distributed, shall notify the local health authorities.

SEC. 14. No person having an infectious disease or having recently been in contact with a person having an infectious disease, shall handle milk or handle cows, measures, or other vessels used for milk or milk products intended for sale until all danger of communicating such disease to other persons shall have passed, as determined by the local health authorities.

SEC. 15. No vessels which have been handled by persons suffering from infectious diseases shall be used to hold or convey milk until they have been thoroughly sterilized.

SEC. 16. No bottle, can, or receptacle used for the reception or storage of milk shall be removed from a private house, apartment, or tenement wherein a person has an infectious disease until such bottle, can, or receptacle shall have been properly sterilized under the direction of the local health authorities.

SEC. 17. Whenever any of the following diseases, smallpox, scarlet fever, diphtheria, typhoid fever, measles, becomes epidemic as adjudged by the local health authorities, the use of milk bottles and such other containers as are left on consumers' premises by milk dealers or their employees, shall be discontinued until such time as existing health conditions warrant the permission of the health authorities to resume their use. Both the householder and the milk dealer will be held responsible for any violation of this regulation.

SEC. 18. The regulations of this chapter shall not be construed as applying to persons keeping cows whose milk is not for sale or distribution; nor shall they be construed to minimize the requirements of any local ordinance relating to milk and its production.

CHAPTER V.

SANITATION OF SCHOOLS.

SECTION 1. School authorities shall not crowd children into schoolrooms in excess of one child to each 225 cubic feet of space, and it shall be the duty of all health officers having jurisdiction to dismiss forthwith any schoolroom in which 225 cubic feet of air space is not supplied to each pupil; and the school authorities shall without delay make provision for pupils in accordance with the requirements herein set forth.

Sec. 2. All schoolhouses, before school opens in the autumn, shall be thoroughly cleansed. The cleaning shall consist in sweeping and scrubbing the floors and thoroughly washing all woodwork, including the wooden parts of desks and seats.

Sec. 3. Ventilation must be carefully attended to in all schoolrooms, and when ventilating ducts do not exist it shall be the duty of the teachers to flood the schoolrooms with fresh air by opening windows and doors at recess and at noontime, and also whenever the air becomes close or foul. All schoolhouses shall be supplied with an abundance of pure drinking water.

All schoolhouse wells shall be supplied with troughs and drains to carry away waste water, and under no conditions shall pools, sodden places, or small or large mudholes be allowed to exist near wells. Buckets and all open water receptacles are condemned and forbidden, for such furnish most excellent opportunities for transmitting disease germs which occur in saliva. When water is not supplied at the pump or from water faucets, or from sanitary flowing drinking fountains, then covered tanks or covered coolers, with free-flowing faucets shall be supplied. The providing of a common drinking cup in the public schools is prohibited.

Sec. 4. Water-closets, dry closets, and outhouses shall be kept clean and sanitary at all times, and pupils should be taught decency and promptly punished for indecency. Water-closets or dry closets, when provided, shall be efficient in every particular; and when said closets are not provided, then good fly-tight, well-ventilated outhouses for the sexes, separated by closely-built fences, shall be provided. Good, dry walks shall lead to all outhouses, and closely built screens or shields shall be built in front of them. Outhouses for males shall have urinals arranged with stalls and with, conduits of galvanized iron or other impervious material draining into a sewer, vault, or other suitable place. Facilities for washing the hands must be provided in all schools, and teachers should instruct pupils to use them after visiting the water-closet or outhouse. The use of roller towels or any towels used in common by two or more pupils is condemned, and it is recommended that schools furnish paper towels for the use of pupils and teachers.

Sec. 5. Health officers shall enforce these rules and promptly enter prosecution for any violation thereof.

CHAPTER VI.

CONSTRUCTION OF SCHOOL BUILDINGS.

SECTION 1. All schoolhouse sites shall be dry, and such drainage as shall be necessary to secure and maintain dry grounds and dry buildings shall be supplied. Said sites and said buildings shall not be nearer than 350 feet to steam railroads or any noise-making industry or any insanitary or unhealthful conditions whatsoever. Good walks shall lead from the street or highway to every schoolhouse, and dry playgrounds shall be provided.

Sec. 2. All two-story schoolhouses shall have dry, well-lighted basements under the entire building; said basements shall have cement floors, and the ceilings shall be not less than 9 feet high. The ground floor of all schoolhouses shall be raised at least 3 feet above the ground level to lower edge of first-floor joists. One-room schoolhouses shall have solid foundations of brick, stone, or concrete, and the area between the ground and the floor shall be thoroughly ventilated, and basements are recommended. Each pupil shall be provided with not less than 225 cubic feet of space, and the interior walls shall be either painted or tinted some neutral color, as gray, slate, buff, or green.

Sec. 3. All school rooms shall be lighted from one side only, and the glass area shall be not less than one-sixth of the floor area, and the windows shall extend to not more than 1 foot from the ceiling, all windows to be provided with roller or adjustable translucent shades of neutral color, as blue, gray, slate, buff, or green. In all schoolhouses desks shall be so placed that the light shall fall over the left shoulders of the pupils.

SEC. 4. Blackboards shall be preferably of slate, but of whatever material, the color shall be a dead black.

SEC. 5. All schoolhouses shall be supplied with pure drinking water, and the water supply shall be from driven wells or other source approved by the local health authorities. Whenever it is practicable, flowing sanitary drinking fountains which do not require drinking cups shall be provided. When water is not supplied from public water faucets, sanitary flowing fountains, or wells, then covered tanks or covered coolers with free-flowing faucets shall be provided. All schoolhouse wells shall be supplied with troughs or drains to carry away waste water, and under no conditions shall pools or sodden places or mudholes be allowed to exist near a well.

SEC. 6. Heating apparatus of all kinds shall be capable of maintaining a temperature of 70° F. in zero weather and of maintaining a relative humidity of at least 30 per cent, and said heaters shall receive air from outside the building and after heating, introduce it into the school room at a point not less than 5 feet from the floor and at a minimum rate of 30 cubic feet per minute for each pupil. When direct-indirect steam or hot-water heating is adopted, then the openings or ducts for admitting outside air shall be opposite the radiators. Halls and office rooms may be heated with direct steam or hot-water radiators, but direct steam and direct hot-water heating are forbidden for school rooms. Ordinary stoves without jackets and inlets for fresh outside air are condemned and forbidden.

All school rooms shall be provided with efficient exit ventilating ducts of ample size, placed near the floor on the side of the room nearest the inlet.

SEC. 7. Water-closets, or dry closets, when provided, shall be efficient and sanitary in every particular, and when said closets are not provided, then good fly-tight, well-ventilated outhouses for the sexes, separated by closely built fences, shall be provided. Good dry walks shall lead to all outhouses, and solid screens or shields shall be built in front of them. Outhouses for males shall have urinals arranged with stalls and with conduits of galvanized iron or other impervious material draining into a sewer, vault, or other suitable place.

SEC. 8. These rules directing specific features in the construction of schoolhouses necessary to secure sanitary conditions shall apply to all new buildings erected and to all old buildings rebuilt or remodeled after the passage of said regulations, and all health officers shall see to the enforcement of these regulations and promptly enter prosecution for any violation thereof.

MUNICIPAL ORDINANCES, RULES, AND REGULATIONS PERTAINING TO PUBLIC HEALTH.

ALAMEDA, CAL.

Rabies—Control of. (Ordinance No. 604 adopted Aug. 20, 1912.)

SECTION 1. It shall be unlawful for any person owning, having an interest in, harboring, or having the care, charge, control, custody, or possession of any dog to allow or permit such dog to go free or to run at large in or upon any public street, alley, or other public place, or in or upon any uninclosed lot or premises, unless such dog is so muzzled as to prevent the same from biting any person or animal.

SEC. 2. All such muzzles or apparatus for muzzling dogs shall be made of wire, of a design approved by the board of health of said city, and shall be securely strapped to the dog's head, and shall be so made and applied that same will completely surround the jaw and nose of the dog on which the same is fastened and be so as to prevent the dog from biting or seizing any person or thing, but so as to allow the opening of the mouth of such animal and allow it to breathe and drink with freedom.

SEC. 3. The term "uninclosed lot or premises" as used in this ordinance is hereby defined to mean any lot, land, or premises not inclosed in such a manner as to prevent any dog confined therein from escaping therefrom.

SEC. 4. It shall be the duty of the poundmaster of the city of Alameda to cause to be captured every dog not muzzled as required by this ordinance and found going free or running at large in or upon any public street, alley, or other place, or in or upon any uninclosed lot or premises within the city of Alameda; or in case the poundmaster shall, upon pursuit, be unable to capture such dog, it shall be the duty of such officer to kill such dog. Dogs captured under the provisions of this section shall be separately confined.

SEC. 5. Any person having in confinement dogs suspected of rabies shall report the capture to the health officer of the city of Alameda and shall submit such dog to the examination of the health officer or his representative, and it shall be the duty of the health officer, when called upon, to examine, or have examined, such dog if it is suspected of having rabies, and to ascertain whether or not such dog is afflicted with rabies. Dogs captured under provision of section 4 and suspected of having rabies shall not be killed, but shall be kept in confinement until the health officer or his representative shall find that further observation of the live animal is not necessary for the determination of the presence or absence of rabies. After the permission of the health officer has been secured, dogs afflicted with rabies may be killed. The person or officer capturing any dog shall, if the owner thereof is known to him, notify such owner that such dog has been captured. If any dog is found not to be afflicted with rabies and is not reclaimed by the owner thereof or other person claiming the same within five days after capture, such dog shall be killed in some humane manner by the person capturing the same, or the officer to whom the dog was delivered. Any person reclaiming any dog captured or confined under the provisions of this ordinance shall pay to the poundmaster such fee or fees as are provided in Ordinance No. 577 for the reclaiming of stray and unlicensed dogs, and such fees when so collected by said poundmaster shall be by him immediately paid into the treasury of the city of Alameda, and shall be thereafter, by the city treasurer, placed in the general fund.

SEC. 6. Whenever the owner or person having the custody or possession of any animal shall observe or learn that such animal has shown symptoms of rabies, or has acted in a manner which would lead a reasonable man to a suspicion that it might have rabies, such owner or person having the custody or possession of such animal shall immediately notify the health officer or his representative, and shall allow the health officer to make an inspection or examination of such animal, and to quarantine such animal until it shall be established to the satisfaction of said official that such animal has or has not rabies.

SEC. 7. Whenever it is shown that any dog has bitten any person, the owner or person having the custody or possession thereof shall, upon order of the health officer, deliver such dog to the poundmaster who shall quarantine it and keep it tied up or confined for a period of two weeks, and the health officer may make an inspection or examination thereof at any time during said period. If it shall appear to the health officer, upon an examination as aforesaid or otherwise, that a dog has rabies, he may kill it forthwith.

SEC. 8. Whenever any animal shall be bitten by another animal having rabies, the owner or person having the custody or possession of the animal so bitten shall, upon being informed thereof, either kill such animal or quarantine it and keep it tied up or confined for a period of six months, and the health officer shall have power, in his discretion, to kill or quarantine the animal so bitten, in case the owner or person having custody or possession thereof shall fail to do so immediately, or in case the owner or person having custody thereof is not readily accessible.

SEC. 9. No person shall bring a dog into the city of Alameda from any part of any county in which rabies has been known to exist within six months previously, except upon the written permission of the health officer of the city of Alameda; and such permission is to be granted only if the health officer is convinced that said dog, whenever in this city during a subsequent period of six months, will be confined or muzzled as indicated in sections 1 and 2 of this ordinance, regardless of whether this ordinance shall be in force during the entire period of six months.

SEC. 10. Any person violating any of the provisions of this ordinance shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine of not more than \$300, or by imprisonment in the city jail for a period of not more than 90 days, or by both such fine and imprisonment.

SEC. 11. This ordinance shall take effect and be in force immediately on and after its passage and shall continue in effect thereafter until and including the 31st day of December, 1912.

BELLEVUE, OHIO.

Privies and cesspools—Construction, and removal of contents of. (Regulations Board of Health adopted Mar. 21, 1912.)

CONSTRUCTION.

SECTION 1. The construction of privy vaults will be permitted only on premises where city water and sewer are not accessible and shall be 4 feet deep and made of either brick or concrete. The walls of such vaults if made of brick shall be of hard-burned sewer brick not less than 8 inches thick (one brick thick) laid in Portland cement mortar and the walls plastered outside and inside with a half-inch coat of Portland cement mortar in proportion of 1 part of Portland cement and 2 parts of clean, sharp sand. After this coating is put on it shall be given a 1-coat wash of liquid Portland cement. The bottom shall be at least three brick course thick laid in cement mortar, or of Portland cement concrete 8 inches thick.

When Portland cement concrete is used to construct vaults, the walls shall be at least 6 inches thick, laid to a form, and the concrete shall be made of 1 part of live

Portland cement, 3 parts of clean sharp sand and 5 parts crushed stone, free from dust and of sizes between one-fourth and $1\frac{1}{4}$ inches in largest diameter, and shall be plastered and grouted inside and out as prescribed above for brick construction.

Vaults shall be made water-tight and their walls continued 12 inches above the ground surface to prevent surface drainage. No retempered cement shall be used.

SEC. 2. Privy vaults shall not be constructed on line of sewered streets nor shall any old vault be connected to sewer.

SEC. 3. Vaults now existing on premises abutting city sewer and provided with city water must be cleaned to the bottom and filled with earth or ashes.

SEC. 4. On premises not accessible to city sewer a vault as prescribed in section 1 must be constructed.

REMOVAL OF CONTENTS.

SECTION 1. No person, firm, or corporation shall remove night soil or clean vaults unless a permit is first obtained of the board of health for that purpose, and shall give bond in the sum of \$500 for the faithful performance of the work. Any person qualifying to remove the contents of privy vaults shall be known as a vault cleaner, and must observe the following rules for doing the work:

(a) The vault cleaner shall have an adequate number of horses, wagons, and employees to carry on the work within the time limit of each permit. He must have an adequate number of water-tight barrels, boxes, or wagon boxes with air-tight lids or tops and all of a character to meet the approval of the health officer. He must provide a dump where night soil may be deposited according to law (sec. 6923 R. S.), and employ cleansing and disinfecting agents as may be directed by the board of health.

(b) The vault cleaner, before performing the work, shall secure from the health officer a written permit for each and every privy vault to be cleaned. The permit shall be issued only on condition that the vault cleaner shall remove the entire contents of the vault and disinfect said vault after the contents are removed, and remove and dispose of such contents in the manner and during the time specified by the health officer.

(c) The vault cleaner must certify to the health officer a statement that the work in each case has been satisfactorily done, and statement may be required by the property owner or agent before settlement is made with the vault cleaner.

(d) The vault cleaner shall not charge more than 35 cents per barrel for night soil removed.

(e) The contents of vaults must be conveyed to the dump promptly after they are removed from the vault.

(f) The vault cleaner shall clean each and every vault within the time limit prescribed on the permit to do such work. He shall leave the privy building over the vault in as good condition as that in which he found it and permit no night soil to remain in the yard or alley.

SEC. 2. Any vault cleaner creating a nuisance as defined in this code will be prosecuted according to law.

SEC. 3. Any vault cleaner or his employees violating any of the rules or regulations for the removal of night soil as herein defined (after a hearing before the board of health) shall forfeit his qualifications as a vault cleaner and receive no further permits to clean vaults.

SEC. 4. Upon sufficient evidence to warrant the revocation of permits, the work of any vault cleaner may be suspended by the health officer until a hearing of the case may be had before the board of health.

SEC. 5. Every vault cleaner shall be held responsible for a violation of the provisions of this code by his employees.

BERKELEY, CAL.**Dogs—Muzzling and Keeping of. (Ordinance Adopted July 23, 1912.)**

SECTION 1. Every person owning or having control of any dog shall keep such dog within a sufficient inclosure, or securely chain such dog on the premises of the person owning or having control of such dog, except as hereinafter provided.

SEC. 2. It shall be unlawful for any person owning or having control of any dog to allow such dog upon any of the public streets, squares, parks, or other public places of the city of Berkeley, unless such dog shall either be in charge of some competent person leading or controlling such dog by a line, rope, or chain, or shall be muzzled with a wire muzzle of a design approved by the council of the city of Berkeley.

SEC. 3. Every dog running at large in violation of the provisions of this ordinance shall be immediately impounded in the public pound by any peace officer, or by the poundmaster, subject to redemption or sale, as provided by ordinance No. 13-N. S.

SEC. 4. If any dog shall bite any person or animal within the city of Berkeley, the owner or person having control of such dog shall, upon request of any peace officer, deliver such dog to such peace officer to be held for 10 days for the purpose of determining whether or not such dog is afflicted with rabies, and the owner of such dog shall pay all the expenses of the keeping thereof during the time such dog shall be so held.

SEC. 5. Every person violating any of the provisions of this ordinance, shall be deemed guilty of a misdemeanor and, upon conviction thereof, shall be punished by a fine of not more than \$25, or by imprisonment for not more than 30 days, or by both such fine and imprisonment.

SEC. 6. This ordinance is hereby declared to be urgent and necessary for the immediate preservation of the public health and safety and to more fully protect and promote the public welfare, and shall take effect immediately upon its final passage, and shall continue in effect thereafter until and including the first day of January, 1913.

BROCKTON, MASS.**Foodstuffs—Care and sale. (Regulation, Board of Health, adopted Aug. 1, 1912.)**

SECTION 1. No person shall allow the body of any animal or part thereof, or any bread, pastry, poultry, or other provisions which may be used as human food, to be carted or carried through the streets or avenues of the city of Brockton unless it be so covered as to protect it from dust, dirt, and flies.

SEC. 2. No cherries, blackberries, huckleberries, raspberries, strawberries, grapes, dates, figs, salted peanuts, cracked nuts of any kind, corn cakes, corn crisp, candy of any description, maple sugar, or any other article or foodstuff which may be used for human food without cooking or peeling, shall be kept or exposed for sale in any street or public place, or outside of any shop or store, or in the open windows or doorways thereof, unless they be kept covered so that they shall be protected from dust, dirt, and flies.

SEC. 3. No vegetables or other articles which are to be used as human food shall be kept or placed or exposed for sale outside of any shop, store, or market, or in the open windows or doorways thereof, where it is possible for such vegetables or other articles to be contaminated by dogs.

SEC. 4. Every person, being the occupant or lessee or any room, stall, building, or place where any meat, fish, birds, fowl, milk, vegetables, butter, fruit, or other articles intended or held for human food shall be stored or kept or shall be offered for sale, shall put and keep such room, stall, building, or place and its appurtenances in a clean and wholesome condition; and every person having charge or interested or engaged, whether as principal or agent, in the care or in respect to the custody or sale of any meat, fish, birds, fowl, milk, butter, fruit, vegetables, or other

articles intended for human food, shall keep, protect, and preserve the same in a clean and wholesome condition and shall not allow the same or any part thereof to be poisoned, infected, or rendered unsafe or unwholesome for human food.

CAMBRIDGE, MASS.

Medicine—Distribution of samples. (Regulation Board of Health adopted Apr. 16, 1912.)

131. No person, firm, or corporation, by himself, or by any agent or employee, shall distribute or leave from house to house in this city any sample of medicine or other substance containing any drug, without a permit from the board of health.

CAMDEN, N. J.

Animals—Keeping of. (Ordinance adopted Sept. 23, 1912.)

SECTION 1. That from and after the passage of this ordinance, that no rabbits, guinea pigs, pigeons, ducks, chickens, geese, or other fowls shall be kept within the city of Camden except under the following conditions:

(a) A permit shall be required therefor from the board of health, which permit shall state the number of animals or fowls to be kept, and shall be revocable at the pleasure of the said board, and must be renewed annually. A fee of \$1 shall be paid by the person receiving such permit.

(b) That under no conditions shall any of the above-mentioned animals or fowls be kept and maintained in tenement houses or tenement house yards.

(c) Such animals shall, under no circumstances be allowed to run at large, and shall be kept confined in a suitable house or coop with an inclosed runway.

(d) Such house must be kept thoroughly clean at all times and shall be cleaned at least once every week, and more often if the health officer shall so require.

(e) No part of said house or runway shall be less than 20 feet from the doors or windows of any dwelling, occupied by human beings, whether for dwellings or business purposes.

SEC. 2. Any person, firm, or corporation who shall be convicted of a violation of this ordinance shall forfeit and pay a penalty of not less than \$5, nor more than \$10 for each and every offense.

CHATTANOOGA, TENN.

Foodstuffs—Fowls to be drawn. (Ordinance adopted Sept. 16, 1912.)

SECTION 1. Hereafter it shall be unlawful for any person or persons within the city of Chattanooga to sell, barter, or give away, or to have on hand for the purpose of sale, or to keep at any store, shop, or stall, or any other place where goods or provisions are kept or exposed to sale, any turkey, chicken, duck, or fowl of any kind from which the entrails have not been withdrawn after the same has been killed and dressed and made ready for market.

SEC. 2. Any person or persons violating the provisions of this ordinance shall be deemed guilty of a misdemeanor and upon conviction therefor before the city judge shall be fined not less than \$5 or more than \$50.

SEC. 3. This ordinance takes effect two weeks from and after its passage, the public welfare requiring it.

CHICAGO, ILL.**Garbage, ashes, and refuse—Where receptacles for shall be placed. (Ordinance adopted Nov. 18, 1912.)**

SECTION 1. That section 997 of the Chicago Code of 1911 be, and the same is hereby, amended so as to read as follows:

"997. *Where kept—Unlawful to place in alleys.*—It shall be the duty of the head of every family occupying or in possession of any house, building, flat, apartment, tenement, or dwelling place in the city of Chicago which is a private residence and for which a vessel or vessels for garbage and a vessel or vessels for ashes and miscellaneous waste, or any of them, have been provided, to present or place, or cause to be presented or placed, such vessel or vessels upon the edge of the sidewalk adjoining said premises, or on the rear of the lots of said premises, for the removal of the contents of such vessel or vessels, at such times and in such manner as the commissioner of public works may direct. It shall be unlawful for any person to place any such vessel in any alley within the city, and in all cases when such vessel is placed on the rear of the lot for the purpose of having its contents removed it shall be entirely within the lot line."

SEC. 2. This ordinance shall take effect and be in force from and after its passage and due publication.

LOS ANGELES, CAL.**Nuisances—Rendering of fats, burying of animals, obnoxious establishments, etc. (Ordinance adopted May 1, 1912.)**

SEC. 31. It shall be unlawful for any person, firm, or corporation to melt or render, or to cause or permit to be melted or rendered, any fat, tallow, or lard except when the same is fresh from the slaughtered animal and taken directly from the places of slaughter in the city of Los Angeles, and when the same is free from sourness and taint and all other causes of offense at the time of melting or rendering. All melting and rendering shall be done in steam-tight vessels, and the gases and odors therefrom shall be destroyed by combustion or other effective means and according to the best and most approved means and processes. All such melting and rendering and everything in connection therewith and the premises wherein or whereon the same shall be conducted shall be free from offensive odor and from other cause of injury to the public health.

SEC. 32. It shall be unlawful for any person, firm, or corporation to bury, or to cause or permit to be buried, any dead animal within the limits of the city of Los Angeles.

SEC. 33. It shall be unlawful for any person, firm, or corporation to erect, establish, conduct, or maintain, or to cause or permit to be erected, established, conducted, or maintained, any factory, or place for boiling or manufacturing varnish, lampblack, glue, or other substance or material that will generate any unwholesome, offensive, or deleterious gas or exhalation or any deposit that is dangerous or prejudicial to life or health, without providing gas consumers or other means of consuming or destroying such gas, exhalation, or other deposit, or without causing such gas, exhalation, or deposit to be consumed or destroyed therein.

SEC. 34. It shall be unlawful for any person, firm, or corporation to construct, establish, conduct, operate, or maintain, or to cause or permit to be constructed, established, conducted, operated, or maintained, any shoddy machine or any carpet-beating machine within 200 feet of any church, schoolhouse, residence, or dwelling house.

SEC. 40. It shall be unlawful for any person, firm, or corporation to unload, discharge, or deposit upon or along the line of any railroad, or upon or along any public street or other public place any manure, offal, or other offensive or nauseous substance,

or to allow any car having therein or thereupon any such substance to remain or stand upon or along any railroad, or upon or along any public street or other public place.

SEC. 44. It shall be unlawful for any person, firm, or corporation to deposit, or to cause or permit to be deposited, in or upon any public street or other public place, any filthy water, or any sweepings from any store or house, or the contents of any cuspidor or any putrid or offensive substance of any kind.

SEC. 45. It shall be unlawful for any person, firm, or corporation to fail, refuse, or neglect to keep the sidewalk in front of his or its house, place of business, or premises in a clean and wholesome condition.

SEC. 46. It shall be unlawful for any person to dust, sweep, or beat any carpet, rug, or other fabric in, upon, or over any public street, alley, or sidewalk at any place except in front of the premises wherein such carpet, rug, or other fabric is used, or at any time except between the hours of 6.30 o'clock and 7 o'clock in the morning.

SEC. 47. It shall be unlawful for any person, firm, or corporation owning, leasing, acting as agent for or occupying any premises to fail, refuse, or neglect to keep such premises in a clean and wholesome condition, and it shall be unlawful for any such person, firm, or corporation to permit any accumulation of manure, garbage, offal, rubbish, stagnant water, or filthy or offensive matter of any kind to be or remain upon such premises.

SEC. 48. It shall be unlawful for any person to permit any vehicle hauling or carrying or used for hauling or carrying any dead animal, offal, garbage, swill, night soil, manure, or other nauseous or offensive substance, to stand or remain in or upon any public street or other public place longer than is necessary for loading and hauling such substance to its destination, or to permit any such vehicle to be in a filthy or offensive condition.

SEC. 49. It shall be unlawful for any person to use any vehicle, tub, or other receptacle for hauling any offal, or the contents of any privy vault, cesspool, or sink, or any nauseous or offensive substance, unless such vehicle, tub, or other receptacle shall be sufficiently strong and tight to prevent any of the contents from leaking or spilling therefrom, or unless the same shall be so tightly covered as to prevent any nauseous odors from escaping therefrom.

SEC. 66. It shall be unlawful for any person, firm, or corporation to establish, conduct, maintain or operate, or to cause or permit to be established, conducted, maintained, or operated, within the city of Los Angeles, any fertilizer factory; provided however, that the provisions of this section shall not apply to any fertilizer factory in operation upon the date of the passage of this ordinance.

A fertilizer factory, within the meaning of this section, is hereby declared to be a factory or place where fertilizer, fertilizing material, or any ingredient used in the preparation of fertilizer is manufactured, produced, or prepared, in whole or in part, from offal, or refuse, or from animal or vegetable matters.

SEC. 67. It shall be unlawful for any person, firm, or corporation, to establish, conduct, or maintain, or to cause or permit to be established, conducted, or maintained, any store or place of business in which dogs, monkeys, cats, guinea pigs, mice, or rats are sold or kept for sale, or to carry on the business of dealing in any of such animals, within 50 feet of any residence, dwelling house, lodging house, hotel, schoolhouse, theater, or church.

MILWAUKEE, WIS.

Sanitary, meat and food, and milk inspectors designated city officers. (Ordinance adopted July 8, 1912).

SECTION 1. Sanitary inspectors, meat and food inspectors, and milk inspectors in the health department are hereby declared to be officers of the city of Milwaukee.

SEC. 2. This ordinance shall take effect and be in force from and after its passage, and publication.

RICHMOND, IND.**Meats and meat products—Preparation, inspection, handling, and sale. (Ordinance adopted Nov. 18, 1912.)**

SECTION 1. It shall be unlawful for any person, partnership, or corporation, either directly or indirectly, to sell or offer for sale within the corporate limits of the city of Richmond, Ind., for human food consumption in said city, the carcass or any part or product thereof of any animal of the cattle, sheep, or swine kind, unless such carcass, part of carcass, or product thereof shall first and before sale or offer for sale, have been inspected, and shall have passed inspection as approved as hereinafter provided.

SEC. 2. For the purpose of preventing the use in said city as hereinafter provided of meat and meat food products, which are unsound, unhealthful, unwholesome, or otherwise unfit for human food, the said city of Richmond as hereinafter provided shall cause to be made by an inspector appointed for that purpose, an examination and inspection of all cattle, sheep, and swine before they shall be allowed to enter into any slaughtering, packing, meat canning, rendering, or similar establishment, in which they are to be slaughtered, and the meat and meat food products thereof are to be used for sale or offered for sale for human consumption as food in said city of Richmond; and all cattle, swine, and sheep which on such inspection show symptoms of disease shall be set apart and slaughtered separately from all other cattle, sheep, or swine, and when so slaughtered, the carcasses of said cattle, sheep, or swine shall be subject to a careful examination and inspection, and all as provided by rules and regulation prescribed by the board of health of said city of Richmond, and any rules and regulations prescribed by the State board of health of the State of Indiana.

That for the purposes herein, said city of Richmond shall cause to be made by an inspector appointed as hereinafter provided, a post-mortem examination and inspection of the carcasses and parts thereof of all cattle, sheep, and swine to be prepared for human consumption at any slaughtering, meat-canning, salting, packing, rendering, or similar establishment in said city of Richmond for the purposes of sale for human-food consumption within said city; and the carcasses and parts thereof of all such animals found to be sound, healthful, wholesome, and fit for human food consumption shall be marked, stamped, tagged, or labeled as "Inspected Richmond," and said inspectors shall label, mark, stamp, or tag as "Condemned Richmond," all carcasses and parts thereof of animals found by said inspector to be unsound, unhealthful, unwholesome, or otherwise unfit for human food consumption; and all carcasses and parts thereof, thus inspected and condemned, shall be destroyed and rendered impossible for food purposes at such establishment by the persons in charge thereof and in the presence of such inspector. Such inspector, after said first inspection, shall, when deemed by inspector necessary, reinspect any carcass or part thereof, to determine whether since inspection the same shall have become unsound, unhealthful, unwholesome, or in any way unfit for human food consumption, and if any such carcass or part or product thereof shall, upon examination and inspection, subsequent to the first examination and inspection, be found to be unsound, unhealthful, unwholesome, or otherwise unfit for human food consumption, it shall be destroyed and rendered impossible for food purposes at such establishment by persons in charge thereof and in the presence of such inspector. The foregoing provisions shall apply to all carcasses or parts of carcasses of cattle, sheep, or swine, or to the meat or to the meat products thereof, which may be brought into any slaughtering, meat-canning, salting, packing, rendering, or similar establishment, and such examination and inspection shall be had before the said carcass or parts thereof shall be allowed to enter into any department wherein the same are to be treated and prepared for meat food products; and the provisions shall also provide and apply to all such products which, after having been issued from any slaugh-

tering or similar establishment, be returned to the same. Such inspector or inspectors shall have access at all times, by day or night, whether the establishment be operated or not, to every part of said establishment; and said inspectors shall mark, stamp, tag, or label as "Inspected Richmond," all such products found to be sound, healthful, and wholesome, and which contain no dyes, chemicals, preservatives, or ingredients which render such meat or meat-food products unsound, unhealthful, unwholesome, or unfit for human food consumption; and said inspectors shall label, mark, stamp, or tag as "Condemned Richmond," all such products found unsound, unhealthful, unwholesome, or which contain any dyes, chemicals, preservatives, or ingredients which render such meat or meat-food products unsound, unhealthful, unwholesome, or unfit for human food consumption, and all such condemned meat or products shall be destroyed in the presence of inspector as above provided. That when any carcass, part, or product thereof of any such animal for human food consumption as contemplated herein, is finally prepared for such consumption and has passed satisfactory examination and inspection, the same shall thereafter be maintained at such establishment under such conditions and under such coverings or in such receptacles as shall maintain and keep the same in sound, wholesome, and fit condition for human food, and under such rules and regulations as may be adopted by the board of health of said city of Richmond; such board of health further notifying persons in charge of such establishments by copy of such rules and regulations adopted by delivery of copy thereof.

Said city of Richmond shall cause to be made by its inspectors such inspection of all slaughtering, meat-canning, salting, packing, rendering, or similar establishments in which cattle, sheep, or swine are slaughtered and the meat and the meat food products thereof are prepared for human food consumption, as may be necessary for proper information concerning the sanitary condition of the same. And said board of health of said city shall prescribe the rules and regulations of sanitation under which said establishment shall be maintained; and where the sanitary conditions of such establishment in the mind and opinion of said board of health are such that the meat or meat products are rendered unclean, unsound, unhealthful, unwholesome, or otherwise unfit for human food, said city of Richmond shall refuse to allow said meat or meat food products to be labeled, marked, stamped, or tagged as inspected and passed.

But the provisions of this ordinance shall not apply to the sale in said city of meat from the carcasses of any such animals above designated being free from disease, slaughtered by any farmer upon his farm and who is not engaged as a business in slaughtering of such animals and the sale of their carcasses, or parts or portions thereof, for human consumption.

SEC. 3. It shall be unlawful for any person, partnership, or corporation, either directly or indirectly to haul, carry, or transport any meat or meat product in or about the corporate limits of the city of Richmond, Ind., in any conveyance, wagon, or vehicle of any kind, except that such conveyance, wagon, or vehicle shall be kept and maintained clean and free from any deleterious animal or vegetable matter of any kind, during any and all times same is used for such purpose of transportation.

SEC. 4. For the purpose of maintaining such inspection and examination and oversight of all animals of the cattle, sheep, or swine kind, and all carcasses, parts thereof, and products thereof, and all establishments and conveyances coming within the purview of this ordinance, there shall be appointed by the Board of Works of City of Richmond, Ind., upon nomination of the board of health of said city, a special sanitary officer or inspector who shall be skilled and competent to inspect all live stock of the cattle, sheep, or swine kind, and all meat or meat products offered for sale for human food consumption in said city. Such inspector shall serve and his term of appointment shall be at the pleasure of such board of health, and for his services such

inspector shall receive a compensation of \$70 per month, and said inspector shall devote all of his time to the duties of his appointment and shall be under the direction of and subject to the rules and orders of said board of health.

Sec. 5. Any person, partnership, corporation, officer of corporation, violating any of the provisions of this ordinance shall be liable to and shall be punished by a fine of not less than \$10 and not more than \$100 for each violation.

Sec. 6. This ordinance shall be published in pamphlet form and shall be in force in two weeks from date of publication of same. The city clerk is ordered to cause at least 50 copies of ordinance published.

Sec. 7. All other ordinances pertaining to the subject matter of this ordinance are hereby repealed.

WASHINGTON, D. C.

Cats—Those running at large to be impounded and destroyed. (Ordinance adopted June 11, 1912.)

That Article VIII of the police regulations be, and it is hereby, amended by adding to the end thereof another section, as follows:

"Sec. 8. That hereafter the poundmaster shall seize all cats found running at large and convey the same to the pound, or other place to be designated by the commissioners, and there destroyed. Any citizen may deliver any such animal to the poundmaster, who shall destroy the same as above required."

PREVALENCE OF DISEASE.

IN CERTAIN STATES AND CITIES.

SMALLPOX.

State Reports.

Places.	Date.	Cases.	Deaths.	Places.	Date.	Cases.	Deaths.
Arizona: ¹				Washington:			
County—				Counties—			
Maricopa... Oct. 1-31....	2	.....		Chelan..... Nov. 1-30....	8	.....
Do..... Nov. 1-30....	8	.....		Clark..... do.....	10	.....
Colorado:				Cowlitz..... do.....	1	.....
Counties—				King..... do.....	3	.....
Denver..... Dec. 1-31....	1	.....		Kittitas..... do.....	1	.....
Larimer..... do.....	1	.....		Klickitat..... do.....	16	.....
Moffat..... do.....	5	.....		Lewis..... do.....	1	.....
Pitkin..... do.....	1	.....		Skagit..... do.....	1	.....
Total.....	8	.....		Spokane..... do.....	23	.....
				Whitman..... do.....	12	.....
Kansas:				Yakima..... do.....	52	.....
Counties—				Total.....	128	.....
Chautauqua Nov. 1-30....	1	.....		Grand			
Cheyenne..... do.....	3	.....		total.....	168	.....	1
Decatur..... do.....	2	.....				
Geary..... do.....	1	.....	1				
Graham..... do.....	1	.....				
Jewell..... do.....	1	.....				
Labette..... do.....	1	.....				
Rawlins..... do.....	5	.....				
Reno..... do.....	1	.....				
Shawnee..... do.....	2	.....				
Wyandotte..... do.....	4	.....				
Total.....	22	.....	1				

¹ September, none.

Maryland.

The secretary of the Maryland State Board of Health reported by telegraph January 6 that a new focus of smallpox infection had occurred in Maryland at Bloomington, Garrett County, where two cases had been notified, and January 8 that there were 3 cases at Hamilton in Baltimore County.

City Reports for Week Ended Dec. 21, 1912.

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Chicago, Ill.....	1	.....	Niagara Falls, N. Y.....	5	.....
Cincinnati, Ohio.....	1	.....	Omaha, Nebr.....	1	.....
Columbus, Ohio.....	1	.....	Passaic, N. J.....	1	.....
Cumberland, Md.....	1	.....	Peoria, Ill.....	1	.....
Evansville, Ind.....	5	.....	Portland, Me.....	2	.....
Harrisburg, Pa.....	1	.....	St. Louis, Mo.....	1	.....
Houston, Tex.....	1	.....	San Francisco, Cal.....	1	.....
La Crosse, Wis.....	17	.....	Spokane, Wash.....	2	.....
Lexington, Ky.....	1	.....	Toledo, Ohio.....	4	.....
Milwaukee, Wis.....	2	.....	Washington, D. C.....	1	.....
Montgomery, Ala.....	1	.....	Zanesville, Ohio.....	16	.....

TYPHOID FEVER.

Kansas Report for November, 1912.

Places.	New cases reported during month.	Places.	New cases reported during month.
Allen County.....	1	Leavenworth County.....	1
Anderson County.....	1	Linn County.....	1
Atchison County.....	1	Marion County.....	3
Barton County.....	1	Marshall County.....	1
Bourbon County.....	1	Mitchell County.....	1
Fort Scott.....	2	Montgomery County.....	1
Butler County.....	3	Coffeyville.....	2
Chase County.....	2	Morris County.....	4
Chautauqua County.....	5	Neosho County.....	2
Clark County.....	7	Phillips County.....	1
Cowley County.....	4	Pratt County.....	4
Crawford County.....	4	Rice County.....	1
Pittsburg.....	4	Saline County.....	3
Doniphan County.....	2	Sedgewick County—	
Douglass County.....	2	Wichita.....	5
Edwards County.....	7	Seward County.....	1
Ellis County.....	7	Shawnee County—	
Finney County.....	1	Topeka.....	2
Franklin County.....	1	Sherman County.....	2
Gove County.....	5	Sumner County.....	3
Greenwood County.....	2	Trego County.....	3
Harper County.....	1	Wilson County.....	1
Hodgman County.....	2	Wyandotte County—	
Jewell County.....	5	Kansas City.....	5
Johnson County.....	1		
Labette County.....	6	Total.....	127
Parsons.....	2		

CEREBROSPINAL MENINGITIS.

Arkansas.

A report was received by telegraph, January 1, that there was an outbreak of cerebrospinal meningitis at Lepanto, Poinsett County, Ark. On January 6, Dr. Morgan Smith, secretary of the Arkansas State Board of Health, reported by telegraph that the meningitis situation at Lepanto had improved—that there had been 25 cases with 17 deaths, and that no new cases had occurred on January 5 or 6.

On January 7 he telegraphed that there had been no new cases for three days.

Kansas Report for November, 1912.

The Kansas State Board of Health reports that during November, 1912, there were notified in the State cases of cerebrospinal meningitis as follows: Brown County, 1 case; Jackson County, 1 case; Sumner County, 1 case; Kansas City, 2 cases.

Tennessee.

The Secretary of the Tennessee State Board of Health reported by telegraph January 8 that there was an outbreak of cerebrospinal meningitis in Dyer County, Tenn.; that there had been 91 cases, or suspected cases, with 41 deaths; that the outbreak was under control; and that on January 6 only 3 new cases had been reported.

Cases and Deaths Reported by Cities for Week Ended Dec. 21, 1912.

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Baltimore, Md.		2	Kansas City, Kans.	1	
Boston, Mass.	2	1	Malden, Mass.		1
Bridgeport, Conn.	1		Nashville, Tenn.	3	1
Butte, Mont.		1	Newark, N. J.	1	1
Chattanooga, Tenn.	1		New Orleans, La.	5	4
Chicago, Ill.	1		New York, N. Y.	9	4
Cincinnati, Ohio.	2		Peoria, Ill.		1
Columbus, Ohio.	1		Philadelphia, Pa.	1	1
Hoboken, N. J.	1		St. Louis, Mo.	2	1
Houston, Tex.	1				

POLIOMYELITIS (INFANTILE PARALYSIS).**Kansas Report for November, 1912.**

The Kansas State Board of Health reports that during November, 1912, there were notified in the State cases of poliomyelitis, as follows: Sedgwick County, 1; Neosho County, 2; and Montgomery County, 4.

Cases and Deaths Reported by Cities for Week Ended Dec. 21, 1912.

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Chicago, Ill.	1		New York, N. Y.	5	1
Cleveland, Ohio.	2	1	Philadelphia, Pa.	1	
Haverhill, Mass.	1		St. Joseph, Mo.	1	
Milwaukee, Wis.		1	St. Louis, Mo.	1	

ERYSIPELAS.**Cases and Deaths Reported by Cities for Week Ended Dec. 21, 1912.**

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Binghamton, N. Y.	1	1	Nanticoke, Pa.	1	
Boston, Mass.		1	Newark, N. J.		3
Cincinnati, Ohio.	6	2	New Castle, Pa.	1	
Cleveland, Ohio.	12	1	New York, N. Y.	22	6
Erie, Pa.	4		Passaic, N. J.	2	
Hartford, Conn.	2		Philadelphia, Pa.	11	1
Milwaukee, Wis.	1		St. Louis, Mo.	10	

PELLAGRA.

During the week ended December 21, 1912, a case of pellagra was reported at Montgomery, Ala.

PLAGUE.**Rats Collected and Examined for Plague.**

Places.	Week ended—	Found dead.	Total collected.	Examined.	Found infected.
California:					
Berkeley	Dec. 21, 1912	2	190	147	
Oakland	do.	16	595	469	
San Francisco	do.	8	1,749	1,351	
Washington:					
Seattle	Dec. 14, 1912		1,058	1,003	

California—Squirrels Collected and Examined for Plague Infection.

During the week ended December 21, 1912, there were examined for plague infection 69 ground squirrels from San Joaquin County and 29 from Santa Clara County. No plague-infected squirrel was found.

PNEUMONIA.**Cases and Deaths Reported by Cities for Week Ended Dec. 21, 1912.**

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Ann Arbor, Mich.	2		Nashville, Tenn.		7
Altoona, Pa.		1	Newark, N. J.		8
Baltimore, Md.	33		New Bedford, Mass.		6
Binghamton, N. Y.	4	4	Newburyport, Mass.		1
Boston, Mass.	34	4	New Castle, Pa.	5	
Braddock, Pa.	1		New Orleans, La.		10
Bridgeport, Conn.		4	Newport, Ky.	1	1
Brockton, Mass.		1	Newton, Mass.	4	4
Butte, Mont.		5	New York, N. Y.		150
Cambridge, Ohio.		1	Northampton, Mass.		2
Chelsea, Mass.		1	Omaha, Nebr.		8
Chicago, Ill.	34	126	Passaic, N. J.		5
Cincinnati, Ohio.		15	Peoria, Ill.		3
Cleveland, Ohio.	32	18	Philadelphia, Pa.	44	62
Coffeyville, Kans.	1		Pittsfield, Mass.		5
Columbus, Ga.		3	Reading, Pa.	1	2
Cumberland, Md.		2	Richmond, Va.		4
Danville, Ill.		3	Roanoke, Va.		1
Dayton, Ohio.		5	Rockford, Ill.		2
Elizabeth, N. J.		2	St. Joseph, Mo.		1
Elmira, N. Y.		3	Salem, Mass.		4
Erie, Pa.	1	2	San Francisco, Cal.	26	
Evansville, Ind.		1	Saratoga Springs, N. Y.	3	
Everett, Mass.		4	Schenectady, N. Y.	3	4
Fall River, Mass.		8	South Bethlehem, Pa.	3	2
Grand Rapids, Mich.	3	3	South Omaha, Nebr.	1	
Harrisburg, Pa.		5	Spokane, Wash.		1
Houston, Tex.		3	Springfield, Mass.		4
La Crosse, Wis.		1	Superior, Wis.		2
Lancaster, Pa.	1		Taunton, Mass.		1
Lexington, Ky.	2		Toledo, Ohio.		5
Logansport, Ind.		2	Waltham, Mass.		1
Lowell, Mass.		8	Washington, D. C.		14
Lynchburg, Va.		2	Wheeling, W. Va.		7
Malden, Mass.		2	Wilkes-Barre, Pa.		4
Manchester, N. J.	2	2	Wilkinsburg, Pa.	1	
Medford, Mass.		2	Williamsport, Pa.	2	5
Melrose, Mass.		1	Wilmington, N. C.		1
Montclair, N. J.		1	Yonkers, N. Y.		8
Montgomery, Ala.		2			

TETANUS.

During the week ended December 21, 1912, tetanus was reported by cities as follows: Milwaukee, Wis., 1 death; Reading, Pa., 1 case.

SCARLET FEVER, MEASLES, DIPHTHERIA, AND TUBERCULOSIS.**Kansas Report for November, 1912.**

The Kansas State Board of Health reports that during November, 1912, there were reported in the State cases of scarlet fever, measles, and diphtheria as follows: Scarlet fever, 253; measles, 15; diphtheria, 132.

Cases and Deaths Reported by Cities for Week Ended Dec. 21, 1912.

Cities.	Population United States Census 1910.	Total deaths from all causes.	Diphthe- ria.		Measles.		Scarlet fever.		Tubercu- losis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Over 500,000 inhabitants:										
Baltimore, Md.	558,485	225	34	2	33	27	34	16		
Boston, Mass.	670,585	244	37	4	147	10	55	2	73	28
Chicago, Ill.	2,185,283	758	219	22	213	2	231	25	209	85
Cleveland, Ohio.	500,663	154	86	8	36	1	33	1	26	11
New York, N. Y.	4,766,883	1,481	318	27	412	7	259	8	356	175
Philadelphia, Pa.	1,549,008	511	66	6	208	3	94	6	67	49
St. Louis, Mo.	687,029	265	63	3	76	2	9		26	19
300,000 to 500,000 inhabitants:										
Cincinnati, Ohio.	364,463	145	37	2	359	6	19		35	21
Milwaukee, Wis.	373,857	129	26	1	2		32	3	21	17
Newark, N. J.	347,469	92	51	2	6		14		33	6
New Orleans, La.	339,075	138	24	2	14		2		12	16
San Francisco, Cal.	416,912	146	16		2		3		21	18
Washington, D. C.	331,069	124	14	2	23		10	1	12	10
200,000 to 300,000 inhabitants:										
Jersey City, N. J.	267,779	82		1				1		6
Providence, R. I.	224,326	52	10	1	3		13		4	15
100,000 to 200,000 inhabitants:										
Bridgeport, Conn.	102,054	22	7				6		1	7
Columbus, Ohio.	181,548	72	21	2	1		5			8
Dayton, Ohio.	116,577	35	16	1	1		1			1
Fall River, Mass.	119,295	36	5	1			6	1	2	3
Grand Rapids, Mich.	112,571	39	4	1			2			1
Lowell, Mass.	106,294	48	4	2	2		120	2	8	3
Nashville, Tenn.	110,364	53					4		6	2
Omaha, Nebr.	124,096	31	2		1		1			2
Richmond, Va.	127,628	45	5		46		9		7	3
Spokane, Wash.	104,402				1		1		5	
Toledo, Ohio.	168,497	51	13	2	19		9	1		4
Worcester, Mass.	145,986	57	7		2		7	1	5	4
50,000 to 100,000 inhabitants:										
Altoona, Pa.	52,127	17	5	2			2			
Bayonne, N. J.	55,545		7		3		1			
Brockton, Mass.	56,878	17	1				6		3	1
Camden, N. J.	94,538		14		2				2	
Elizabeth, N. J.	73,409	22	6		6		4			2
Erie, Pa.	66,525	12	18					1	4	1
Evansville, Ind.	69,647	24	11	1	1		3			2
Harrisburg, Pa.	64,186	20	6	2	1					
Hartford, Conn.	98,915	21	6	1	10		19	1	7	
Hoboken, N. J.	70,324		5		5				2	1
Houston, Tex.	78,800	25	2				8			
Kansas City, Kans.	82,331		3						3	
Manchester, N. H.	70,063	19	10	1			4		3	3
New Bedford, Mass.	96,652	27	5		5		4		6	3
Oklahoma City, Okla.	64,205	13	2							
Passaic, N. J.	54,773	21	2		4				3	1
Peoria, Ill.	66,980	18	1							
Portland, Me.	58,571	19	7	2			1			
Reading, Pa.	96,071	38	11		8		3		1	2
St. Joseph, Mo.	77,403	22	1		1		4		1	1
Schenectady, N. Y.	72,826	26	3	1	1					1
South Bend, Ind.	53,684	14	2				2			4
Springfield, Mass.	88,926	24	2	1	6				4	3
Trenton, N. J.	96,815	48	5				1		3	3
Wilkes-Barre, Pa.	67,105	21	3	1	1		4			2
Yonkers, N. Y.	79,803	33	15	2	7		2		7	3
25,000 to 50,000 inhabitants:										
Aurora, Ill.	29,807	10	1	1						
Binghamton, N. Y.	48,443	11	1						1	
Brookline, Mass.	27,792	8	2				1			
Butte, Mont.	39,165	18					5			1
Chattanooga, Tenn.	44,094		1		2					
Chelsea, Mass.	32,452	5	4						1	
Chicopee, Mass.	25,401	6	1		12	1	2			
Danville, Ill.	27,871	12	1				3	1		1
East Orange, N. J.	34,371								2	
Elmira, N. Y.	37,176	9	1		3				1	1
Everett, Mass.	33,484	2	1						2	
Fitchburg, Mass.	37,826	11			6		1		2	1
Haverhill, Mass.	44,115		3		4				8	
La Crosse, Wis.	30,417		2							
Lancaster, Pa.	47,227		1		1		1		5	
Lexington, Ky.	35,099	14	1							1
Lynchburg, Va.	29,494	7	1		1				3	

Cases and Deaths Reported by Cities for Week Ended Dec. 21, 1912—Continued.

Cities.	Population United States Census 1910.	Total deaths from all causes.	Diphthe- ria.		Measles.		Scarlet fever.		Tubercu- losis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
25,000 to 50,000 inhabitants— Con.										
Malden, Mass.	44,404	16	2	1	2		1			
Montgomery, Ala.	38,136	17	3							
Newcastle, Pa.	36,280				1		1			
Newport, Ky.	30,309	16	3				7		1	1
Newton, Mass.	39,806	9					1		1	
Niagara Falls, N. Y.	39,445	8			8		1			
Norristown, Pa.	27,875	11								
Orange, N. J.	29,630	12	2		2		2		1	1
Pittsfield, Mass.	32,121	10	3				3	1	2	
Portsmouth, Va.	33,190	15	2							
Racine, Wis.	38,002	8					2			
Roanoke, Va.	34,874	6	1		3		1		2	2
Rockford, Ill.	45,401		5							
Salem, Mass.	43,697	17								
South Omaha, Nebr.	26,259	5								
Springfield, Ohio.	46,921		7	1	3		5			
Superior, Wis.	40,384	9					1			
Taunton, Mass.	34,259	10							1	1
Waltham, Mass.	27,834	13					1		1	
West Hoboken, N. J.	35,403		3				3		1	
Wheeling, W. Va.	41,641	31	6	1	38		1		5	1
Williamsport, Pa.	31,869	13	1							
Wilmington, N. C.	25,748	8	2							
Woonsocket, R. I.	38,125									
York, Pa.	44,750		2		23					
Zanesville, Ohio.	28,026	9								4
Less than 25,000 inhabitants:										
Ann Arbor, Mich.	14,817	7			1					
Beaver Falls, Pa.					1					
Biddeford, Me.	17,079	6		1						
Braddock, Pa.	17,759		2		8		2			
Cambridge, Ohio.	11,327	2	1							
Clinton, Mass.	13,075	5	2		149					
Coffeyville, Kans.	12,687	2	2							
Columbus, Ga.	20,554	11								
Columbus, Ind.		3	1							
Concord, N. H.	21,479	6					1			
Cumberland, Md.	21,839	9							2	1
Dunkirk, N. Y.			1				7		1	
Galesburg, Ill.	22,089	3							1	
Harrison, N. J.	14,489	6	1							
Homestead, Pa.	18,713		1		10					
Kearny, N. J.	18,659	7	1							
La Fayette, Ind.	20,081	4	2							
Logansport, Ind.		8	1	1	1		1			
Marinette, Wis.	14,610	4								
Medford, Mass.	23,150	8	1				3	1	1	
Melrose, Mass.	15,715	3								
Moline, Ill.	24,190	2	2				1			
Montclair, N. J.	21,450	7					1		1	
Morristown, N. J.	12,507	7			1					
Nanticoke, Pa.	18,857	1	2							
Newburyport, Mass.	19,240	6								
North Adams, Mass.	22,019	9			1				1	1
Northampton, Mass.	19,931	7					2		1	
Ottumwa, Iowa.	23,012	7	1				4			
Saratoga Springs, N. Y.		7								
South Bethlehem, Pa.		8	1	1						1
Steelton, Pa.	14,476	6	2		1					
Wilkinsburg, Pa.	18,924		1		48					
Woburn, Mass.	18,594	3	1						1	

IN INSULAR POSSESSIONS.

HAWAII.

Plague-infected Rats Found..

A plague-infected rat was found dead in a stable on Honokaa plantation December 23, 1912. Plague has also been verified in rats found dead at the house in which the case of pneumonic plague was reported December 16, 1912.

Examination of Rodents for Plague Infection.

During the week ended December 14, 1912, 228 rats were examined at Honolulu for plague infection. No plague-infected rat was found.

During the week ended December 7, 1912, 1,708 rats and mongooses were examined at Honokaa; and during the same period 934 rats and mongooses were examined at Hilo. None were found to be plague infected.

The last case of human plague occurred at Kukuihaele, Hawaii, December 16, 1912. The last plague-infected rat was found on Honokaa plantation December 23, 1912.

PHILIPPINE ISLANDS.

Plague at Manila.

Passed Asst. Surg. Heiser, chief quarantine officer and director of health for the Philippine Islands reports:

During the week ended November 16, 1912, there were reported at Manila 5 cases of plague with 4 deaths.

PORTO RICO.

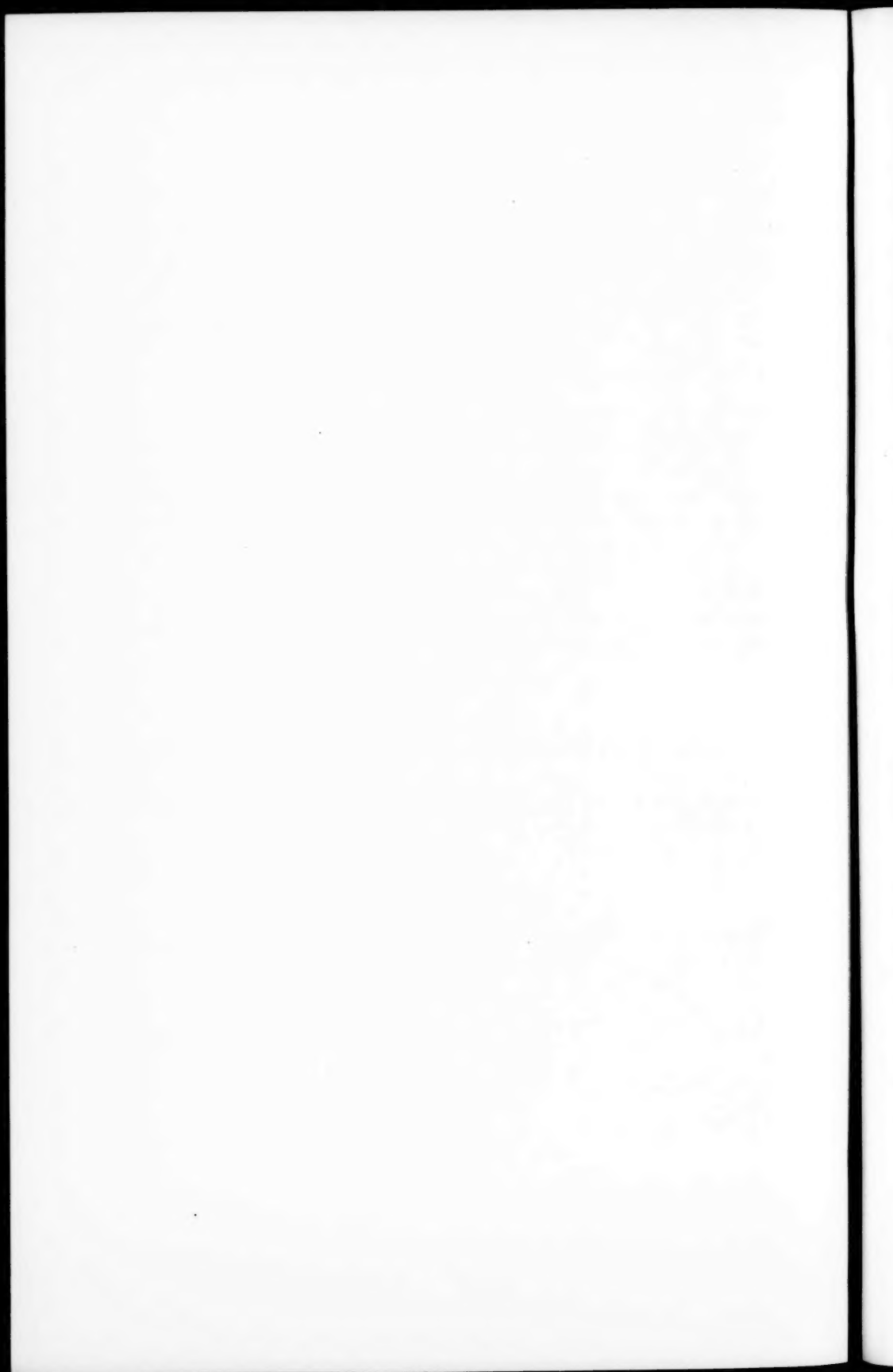
Plague Situation.

Passed Asst. Surg. Creel reports:

RATS EXAMINED DECEMBER 14 TO 21, 1912.

Place.	Rats exam- ined.	Rats found infected.
All Porto Rico.....	1,174	.....
San Juan municipality:		
San Juan.....	152	.....
Puerta de Tierra.....	20	.....
Santurce.....	124	.....

The last case of plague in man occurred in San Juan September 12, 1912; the last plague-infected rat was found at Caguas during the week ended December 14, 1912.



FOREIGN REPORTS.

AUSTRALIA.

Sydney—Examination of Rats.

During the four weeks ended November 23, 1912, there were examined at Sydney for plague infection 1,433 rats. No plague-infected rat was found.

CUBA.

Habana—Transmissible Diseases.

DECEMBER 10 TO 20, 1912.

Disease.	New cases.	Deaths.	Remain- ing under treat- ment.
Leprosy.....	2	1	246
Malaria.....	1	.....	2
Typhoid fever.....	12	4	39
Diphtheria.....	12	1	6
Scarlet fever.....	8	1	9
Measles.....	17	.....	14
Varicella.....	2	.....	2
Paratyphoid.....	.....	.....	2

Examination of Rats.

At Habana rats were examined for plague infection as follows: Week ended December 14, 1912, 469 rats; week ended December 21, 1912, 467 rats; week ended December 28, 1912, 618 rats. No plague-infected rat was found.

JAPAN.

Status of Cholera.

Surg. Irwin, at Yokohama, reports:

The number of cases reported in Japan continues to decline. During the week ended December 7, 1912, 85 cases were reported, as against 94 for the preceding week. The total number of cases reported from the beginning of the epidemic to December 7, 1912, was 2,647. In Yokohama the number of cases reported during the week ended December 7 was 6, as against 9 in the preceding week, with a total of 49 cases since the beginning of the epidemic, of which number 9 occurred on vessels arriving from other ports.

SENEGAL.

Yellow Fever at Dakar.

Yellow fever was reported present at Dakar, Senegal, December 7, 1912.

SPAIN.

Epidemic Smallpox.

An epidemic of smallpox was reported present in Spain December 7, the disease being notably prevalent in Barcelona city and province and at Tarragona, Almeria, and Malaga. The number of cases present in Barcelona was not reported, but it was stated that the epidemic had reached large proportions, 16 deaths from the disease having been officially reported for the week ended December 7, 1912.

MOVEMENTS OF INFECTED VESSELS.

Cholera.

BOSNIAN.—At Odessa, Russia, November 18, 1912, from London via Constantinople, 2 cases, with 1 death.

Plague.

BELLAILSA.—At Hamburg, Germany, September 2 to 5, 1912, from Rosario July 2 via Cape Verde Islands, 2 cases in crew. River Tyne, September 28, 1912, from Hamburg, 1 case in crew.

Yellow Fever.

PUEBLA.—At Laguna del Carmen, Mexico, September 14, 1912, from Vera Cruz and other Mexican ports, 1 case on board.

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX.

Reports Received During Week Ended Jan. 10, 1913.

CHOLERA.

Places.	Date.	Cases.	Deaths.	Remarks.
Dutch East Indies:				
Java—				
Batavia.....	Nov. 17-23.....	12	5	
India:				
Bombay.....	Nov. 24-30.....	8	8	
Calcutta.....	Nov. 19-23.....		26	
Madras.....	Nov. 24-30.....	6	8	
Japan.....				July 10-Dec. 7: Cases, 2,647.
Aita Ken.....	Dec. 2.....	1		
Chiba Ken.....	Nov. 23-Dec. 6.....	22		
Fukushima Ken.....	Dec. 5.....	1		
Hioga Ken.....	Nov. 27-Dec. 5.....	21		
Hiroshima Ken.....	Nov. 23.....	1		
Ibaraki Ken.....	Dec. 6.....	2		
Kanagawa Ken.....				Total Nov. 23-Dec. 6: Cases, 33.
Yokohama.....	Nov. 24-Dec. 7.....	15		Sept. 25-Dec. 7: 9 cases from vessels.
Kochi Ken.....	Nov. 28-Dec. 4.....	3		
Nagasaki Ken.....	Nov. 23-Dec. 1.....	7		
Osaka Fu.....	Nov. 23-Dec. 3.....	14		
Saga Ken.....	.....do.....	5		
Shizuoka Ken.....	Dec. 3.....	1		
Taiwan (Formosa).....				Total Nov. 3-23: Cases, 48; deaths, 42.
Tokyo Fu.....	Nov. 23-Dec. 6.....	68		
Tokyo.....				Oct. 2-Dec. 7: Cases, 273; and in vicinity, 342.
Wakamatsu Ken.....	Nov. 26.....	1		
Turkey in Asia:				
Jidda.....	Dec. 9-14.....	26	28	

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.**Reports Received During Week Ended Jan. 10, 1913—Continued.****YELLOW FEVER.**

Places.	Date.	Cases.	Deaths.	Remarks.
Senegal: Dakar.....	Dec. 7.....			Present.

PLAGUE.

China: Shanghai.....	Nov. 18-24.....		1	
India: Bombay.....	Nov. 4-30.....	5	4	
Calcutta.....	Nov. 19-23.....		5	
New Caledonia: Numea.....	Oct. 29.....	2		Sept. 17-Oct. 17, 8 cases, with 5 deaths.
Peru: Departments— Arequipa— Mollendo.....	Dec. 1-7.....	2	2	
Callao— Callao.....	Sept. 1-7.....			Present.
Lambayeque.....	do.....			Do.
Philippine Islands: Manila.....	Nov. 10-16.....	5	4	

SMALLPOX.

Abyssinia: Adis Ababa.....	Nov. 24-30.....			Present.
Dutch East Indies: Java— Batavia.....	Nov. 17-23.....	5		
Chile: Punta Arenas.....	Oct. 31.....	2		Imported.
China: Chungking.....	Nov. 3-16.....			Do.
Hongkong.....	Nov. 24-30.....	1	1	
Nanking.....	Dec. 7.....			Do.
Shanghai.....	Nov. 18-Dec. 1.....	2	15	Deaths among natives.
France: Paris.....	Dec. 1-7.....	2		
Germany.....				Total, Nov. 24-30: 5 cases not included in report page 2231, vol. xxvii; Dec. 1-7, 6 cases.
Gibraltar.....	Dec. 9-15.....	1		
India: Bombay.....	Nov. 24-30.....	1		
Mexico: Aguascalientes.....	Dec. 23-29.....		2	
Chihuahua.....	do.....		1	
Peru: Callao.....	Sept. 1-14.....			Present.
Lima.....	do.....			Do.
Mollendo.....	Dec. 1-7.....	4		
Portugal: Lisbon.....	Dec. 8-14.....	5		
Russia: Warsaw.....	Sept. 29-Oct. 5.....	2		
Spain: Barcelona.....	Dec. 8-21.....	36		
Madrid.....	Nov. 1-30.....		9	
Valencia.....	Dec. 8-14.....	7		
Turkey in Europe: Constantinople.....	do.....		15	

CHOLERA, YELLOW FEVER, PLAGUE AND SMALLPOX—Continued.**Reports Received from Dec. 27, 1912, to Jan. 3, 1913.****CHOLERA.**

Places.	Date.	Cases.	Deaths.	Remarks.
Dutch East Indies:				
Borneo—Pontianak.....	Oct. 6.....	1		
Java—				
Batavia.....	Nov. 9-16.....	20	16	One case among Europeans.
Madison.....	Sept. 15-21.....	8	8	
Paserocean Residency.....	Sept. 20-26.....	2	1	
Sumatra—Djambi.....	Sept. 4-17.....	33	14	
India:				
Bombay.....	Nov. 17-23.....	4	1	
Calcutta.....	Nov. 9-16.....		19	
Cochin.....	Oct. 19-25.....	5	5	
Russia—Odessa.....				Nov. 18-20, one case from s. s. Bosnian from Constantinople. Confined in the quarantine barracks.
Siam—Bangkok.....	Oct. 13-Nov. 9.....		3	
Turkey in Asia.....				Total, Nov. 17-23: Cases, 160; deaths, 218.
Adana—Adana.....	Nov. 17-23.....	2	1	
Aleppo—Alexandretta.....	do.....	2	1	
Angora.....	do.....	24	24	
Brusa.....	do.....	6	16	
Castamoni.....	do.....	2		
Diarbekir.....	do.....	8	2	
Hedjaz—				
Jidda.....	Nov. 25-Dec. 8.....	369	365	Among returning pilgrims.
Mekka.....	Nov. 17-23.....	111	172	
Ismidt.....	do.....	3	1	
Mosul.....	do.....		1	
Smyrna.....	do.....	2		
Turkey in Europe—Constantinople.....	Dec. 3-9.....	540	229	Total since Nov. 5: Cases, 1,457; deaths, 687.
Zanzibar.....	Nov. 8-21.....	81	80	From Mwera, Chwaka, and Moko-toni.
At sea.....				Nov. 18-20, one fatal case on s. s. Bosnian, en route from Constantinople to Odessa.

PLAGUE.

Brazil: Rio de Janeiro.....	Nov. 3-23.....	6	2	Free Nov. 18.
British East Africa: Mombasa.....	Oct. 1-31.....	12	12	
Dutch East Africa:				
Java—				
Kediri.....	Oct. 6-12.....	29	29	
Madison.....	do.....	8	8	
Paserocean Residency.....	do.....	42	44	
Surabaya.....	Oct. 6.....	1	1	
India:				
Bombay.....	Nov. 17-23.....	5	5	
Calcutta.....	Nov. 9-16.....		4	
Karachi.....	Nov. 19-23.....	2	2	
Peru: Mollendo.....	Nov. 17-23.....	5	2	

SMALLPOX.

Algeria:				
Departments—				
Algiers.....	Oct. 1-31.....	11		
Constantine.....	do.....	11		
Oran.....	do.....	118		
Austria-Hungary: Galicia.....	Nov. 10-16.....	2		
Brazil:				
Para.....	Dec. 1-7.....	2		
Rio de Janeiro.....	Nov. 3-23.....	8	1	
British East Africa: Mombasa.....	Oct. 1-31.....	40	13	
Ontario—Toronto.....	Dec. 1-21.....	5		
Quebec—				
Montreal.....	Dec. 15-21.....	4		
Quebec.....	do.....	1		
China: Tientsin.....	Nov. 17-23.....		1	

CHOLERA, YELLOW FEVER, PLAGUE AND SMALLPOX—Continued.**Reports Received from Dec. 27, 1912, to Jan. 3, 1913—Continued.****SMALLPOX—Continued.**

Places.	Date.	Cases.	Deaths.	Remarks.
Dutch East Indies:				
Java—Batavia.....	Nov. 9-16.....	5	1	
Egypt: Cairo.....	Nov. 12-Dec. 2....	1	1	
France: Marseille.....	Nov. 1-30.....		1	
Germany.....	Dec. 8-14.....	2		
India: Bombay.....	Nov. 17-23.....	2		
Mexico:				
Aguascalientes.....	Dec. 9-15.....		1	
San Luis Potosi.....	Sept. 15-21.....	1		
Peru: Mollendo.....	Nov. 24-30.....	1	1	
Portugal: Lisbon.....	Dec. 1-7.....	9		
Russia:				
Odessa.....	Nov. 17-23.....	2		
Warsaw.....	Sept. 22-28.....	3		
Spain:				
Barcelona.....	Dec. 1-7.....		10	
Valencia.....	do.....	6	1	
Switzerland: Basel.....	Nov. 14-20.....	2		
Turkey in Europe: Constanti- nople.....	Dec. 1-7.....		16	
Zanzibar.....	Nov. 8-14.....		1	